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Prof J.P. de Lange
Chairman of the Main Committee
HSRC Investigation into Education

REPORT OF THE WORK COMMITTEE: EDUCATION FINANCING

As Chairman I take pleasure in submitting the report of the Work Committee: Education financing to the Main Committee for consideration. The final chapter contains a summary of the report.

**DR S.S. BRAND
CHAIRMAN**

STATEMENT

This report has been prepared by the Work Committee: Education financing instituted by the HSRC Main Committee for the Investigation into Education.

This report reflects the findings, opinions and recommendations of the Work Committee: Education financing and, where applicable, those of groups or individuals in the work committee with regard to matters about which there are differences of opinion. The findings, opinions and recommendations contained in this report do not necessarily reflect the point of view of either the HSRC or the HSRC Main Committee for the Investigation into Education.

This report is regarded by the HSRC Main Committee for the Investigation into Education as a submission of the Work Committee: Education financing to the Main Committee. The point of view and recommendations of the HSRC Main Committee will be contained in its final report that will be submitted to the Cabinet.

Human Sciences Research Council

Investigation into Education

Report of the Work Committee:

Education financing

PRETORIA
JULY 1981

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PRICE: R3,60
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ORIENTATION

REQUEST

In June 1980 the Cabinet requested the Human Sciences Research Council to conduct an in-depth investigation into all facets of education in the RSA. The request to the HSRC read as follows:

"Your Council, in co-operation with all interested parties, must conduct a scientific and co-ordinated investigation and within 12 months make recommendations to the Cabinet on:

- (a) guiding principles for a feasible education policy in the RSA in order to
 - (i) allow for the realization of the inhabitants' potential,
 - (ii) promote economic growth in the RSA, and
 - (iii) improve the quality of life of all the inhabitants of the country
- (b) the organization and control structure and financing of education
- (c) machinery for consultation and decision-making in education
- (d) an education infrastructure to provide for the manpower requirements of the RSA and the self-realization of its inhabitants, and
- (e) a programme for making available education of the same quality for all population groups.

The investigation must be conducted in the light of, among other things, the present educational situation, the population composition in South African society and the means that can be made available for education in the national economy. The investigation must cover all levels of education, i.e. pre-primary, primary, secondary and tertiary."

In accordance with the South African Plan for Research into the Human Sciences, the following plan of action was decided on:

- (a) Prof. J.P. de Lange, Rector of the Rand Afrikaans University would be appointed as research leader.
- (b) After the necessary consultation a high-level co-ordinating committee would be appointed to guide and co-ordinate the Investigation and guarantee its scientific character. Members of the committee would include representatives of interested government departments, the private sector as well as eminent scientists from all the disciplines able to

make a contribution to the development of education.

- (c) Representatives of education institutions would be invited to serve on the subcommittees and work groups of the Investigation.
- (d) All population groups would be involved in the co-ordinated conducting of the Investigation.
- (e) The Investigation would be conducted in a spirit of positive co-ordination i.e. the available research manpower both within and outside the HSRC and all research activities which had either already been concluded or were still going on, would be included in the Investigation on a basis of voluntary co-operation.
- (f) The HSRC would undertake parts of the Investigation itself, but would in the main part make its research structure available to contract researchers for the Investigation.
- (g) Priority would be given to the most pressing problem areas so that the Investigation could be expedited and interim reports submitted to the Cabinet in good time.
- (h) Where applicable, alternative solutions for problems in education would be submitted.

THE MAIN COMMITTEE

The Main Committee of the Investigation into Education, whose members were appointed in their personal capacity by the Council of the HSRC, was as follows:

Prof. J.P. de Lange (Chairman)	Rector, Rand Afrikaans University
Prof. A.N. Boyce	Rector, Johannesburg College of Education
Dr S.S. Brand	Chief, Financial Policy, Department of Finance
Dr R.R.M. Cingo	Inspector of Schools, Kroonstad East Circuit, Dept. of Education and Training
Dr J.G. Garbers	President, Human Sciences Research Council
Mr J.B. Haasbroek	Director, South African Institute for Educational Research - HSRC

Dr K.B. Hartshorne	Centre of Continuing Education, University of the Witwatersrand
Prof. J.H. Jooste	Director, Transvaal Education Department
Prof. S.R. Maharaj	Dean, Faculty of Education, University of Durban-Westville
Dr P.R.T. Nel	Former Director of Education, Natal Dept. of Education and Dept. of Indian Education
Prof. A.C. Nkabinde	Principal, University of Zululand
Mr R.D. Nobin	Inspector of Education, Dept of Internal Affairs (Indian Affairs)
Mr M.C. O'Dowd	Anglo-American Corporation of SA Ltd
Mr A. Pittendrigh	Director, Technikon Natal
Miss C.C. Regnart	Westerford High School
Dr P. Smit	Vice-President, Human Sciences Research Council
Mr F.A. Sonn	Director, Peninsula Technikon and President: Union of Teachers' Associations of SA.
Mr J.F. Steyn	Chief Secretary, Transvaalse Onderwysersvereniging and Secretary: Federal Council of Teachers' Associations in SA.
Prof. N.J. Swart	Vice-Rector, Potchefstroom University for Christian Higher Education
Mr L.M. Taunyane	President, Transvaal United African Teachers' Association
Dr P.J. van der Merwe	Deputy Director-General, Department for Manpower
Prof. R.E. van der Ross	Principal, University of the Western Cape
Prof. F. van der Stoep	Dean, Faculty of Education, University of Pretoria
Prof. N.T. van Loggerenberg	Dean, Faculty of Education, University of the OFS and Chairman: South African Teachers' Council for Whites
Dr R.H. Venter	Director, University Affairs, Dept. of National Education
Prof. W.B. Vosloo	Head, Department of Political Science and Public Administration, University of Stellenbosch

After the Investigation had been in progress for some months, a request was received from the Department of National Education of South West Africa that it be granted observer status on the Main Committee - this was approved. From the fifth meeting of the Main Committee, Mr J.A. de Jager, Secretary of the Department, therefore also attended meetings of the Main Committee.

At the beginning of the Investigation Dr S.W.H. Engelbrecht was appointed secretary and Dr F.P. Groenewald co-ordinator of the Investigation. In due course the secretariat was expanded with the appointment of Dr D.J. van den Berg, after which the above-mentioned three persons acted as secretary-co-ordinators. Mr C.P. Serfontein was later appointed assistant co-ordinator. During the last phase of the Investigation the secretariat was further expanded when Prof J. McG. Niven of the University of Natal was seconded to the HSRC, for three months, from February to May 1981. The administrative staff consisted of Mrs I.S. Samuel, Mrs A. van der Lingen, Miss J.M.M. Botha, Mrs S. van der Walt and other temporary staff.

OPERATIONALIZATION OF THE RESEARCH REQUEST

The operationalization of the research request resulted in the establishment of 18 work committees each being responsible for a different aspect of education. Although all the work committees were not identified at the first meeting, the following work committees were eventually established. (For each work committee the name of the Chairman is given who in all cases had to be a member of the Main Committee. The chairman of the Main Committee was ex officio member of all the work committees.)

Educational principles and policy	Prof. F. van der Stoep
Education management	Dr K.B. Hartshorne
Education financing	Dr S.S. Brand
Education system planning	Mr J.B. Haasbroek
Curriculum development	Prof. F. van der Stoep
Guidance	Miss C.C. Regnart
Education for children with special educational needs	Dr J.G. Garbers
Building services	Mr F.A. Sonn
Health, medical and paramedical services	Mr R.D. Nobin
Demography, Education and Manpower	Dr P.J. van der Merwe
Teaching of the Natural Sciences, Mathematics and technical subjects	Mr J.B. Haasbroek
Recruitment and training of teachers	Prof. N.T. van Loggerenberg
Innovational strategies in education	Prof. W.B. Vosloo
A programme for education of equal quality	Prof. R.E. van der Ross
Legal matters	Mr M.C. O'Dowd
Educational technology	Mr A. Pittendrigh

Only in the case of the last work committee was a chairman not appointed from the Main Committee. Miss H.J. Otto of the HSRC library compiled the bibliography for each of the work committees.

During the last stages of the Investigation a Synthesis Committee was appointed to consolidate especially the work of three work committees, namely Education management, Education system planning and Education financing. The chairman of the Main Committee of the Investigation into Education was appointed chairman of the Synthesis Committee.

THE FIELD OF THIS REPORT AND THE COMPOSITION OF THE WORK COMMITTEE

This report deals with the financing of education and was undertaken by the Work Committee: Education financing. The first meeting of the work committee was held on 11 September 1980 and five further meetings followed before the report was finalized and submitted to the Main Committee.

Dr S.S. Brand was appointed chairman of the work committee by the Main Committee. The following persons were appointed as members of the work committee:

Dr S.S. Brand (Chairman) - Member of the Main Committee
Mr C.D. Beukes - Bureau of Education, Department of Internal Affairs
Prof. J.H. Jooste - Member of the Main Committee
Mr B.M. Moodley - Department of Internal Affairs
Mr S. Motsuenyane - National African Federated Chamber of Commerce
Mr M.C. O'Dowd - Member of the Main Committee
Prof. N.J. Swart - Member of the Main Committee
Prof. G.J. Trotter - Department of Economics, University of Natal
Mr C. van Niekerk - South African Institute for Educational Research, HSRC
Dr R.H. Venter - Member of the Main Committee
Dr F.P. Groenewald - Secretary-co-ordinator, HSRC
Mrs J.H. van Schalkwyk - Minuting Secretary, South African Institute for Educational Research, HSRC

At some of the meetings Mr M.M. Maubane (African Bank, Johannesburg) acted as alternate for Mr S. Motsuenyane, and Mr E. Osman (Department of Internal Affairs) as alternate for Mr B.M. Moodley.

DATES OF MEETINGS

The work committee met on the following dates:

- 11 September 1980
- 13 October 1980
- 21 November 1980
- 4 February 1981
- 12 May 1981
- 4 June 1981

RESEARCH AND RESEARCH AID

Various research projects were written and reports submitted to serve as a basis for the finalizing of the report of the work committee. The following reports were submitted to the work committee:

- a. Schedule of number of pupils and personnel for all population groups with projections up to 2020: Mr C. van Niekerk and Mr D.J. Bezuidenhout, SAIER, HSRC.

This report was undertaken in the first place at the request of the Work Committee: Demography, education and manpower.
- b. Some comments on factors and problems that influence the calculation and comparison of unit expenses of education: Mr C. van Niekerk, SAIER, HSRC
- c. Die rol van die onderwys in die ekonomie: Mr A. Melck, Department of Economics, University of Stellenbosch.
- d. Finansiering van onderwys in 'n aantal oorsese lande: Dr P. Kruger, Transvaal Education Department.
- e. i. Bron en aanwending van fondse in die onderwys met spesiale verwysing na die bevordering van pariteit tussen verskillende volkere-groepe.
 - ii. Bestedingspatroon van die Transvaalse Onderwysdepartement.
 - iii. Privaatonderwysbesteding in Suid-Afrika. These three projects were undertaken by Prof. P.J. Nieuwenhuizen, Dr I.N.A. van der Walt and dr I.A. van der Westhuizen of the Department of Economics, Rand Afrikaans University.
- f. Implications of the principles for the provision of education for the financing of education: The chairman of the work committee prepared

a memorandum on the subject.

- g. Beraming van onderwysbesteding ten opsigte van primêre en sekondêre onderwys indien die subsidieformule soos van toepassing op blanke provinsiale onderwys vir die onderwys van alle bevolkingsgroepe toegepas sou word: Mr P.F. Buurke and Mr E.H. Dednam, Department of Finance.
- h. Beginnels wat toegepas word by die berekening van subsidies vir provinsiale onderwys: Mr E.H. Dednam, Department of Finance.
- i. Onderwys vir sintuiglik-, neuraal-, verstandelikgestremde en pedagogies verwaarloosde of gedragsafwykende leerlinge: Mr C. van Niekerk, Mr D.J. Bezuidenhout and Mr P.J.T. Hamman, SAIER, HSRC. This report was also written at the request of the Work Committee: Demography, Education and Manpower and the Work Committee: Education for children with special educational needs.
- j. Comment on the report of Mr A. Melck by Mr M.C. O'Dowd (member of the work committee).
- k. Statistiek ten opsigte van na-skoolse en tersiêre opleiding: Mr C. van Niekerk, Mr D.J. Bezuidenhout and Mr P.J.T. Hamman, SAIER, HSRC. This report was also written at the request of the Work Committee: Demography, Education and Manpower.
- l. The work committee also made use of the reports of the Work Committee: Building services. These reports were prepared by the National Building Research Institute of the CSIR. The extract: "The current and projected need for school facilities and cost implications" is referred to here in particular.
- m. A bibliography on the subject "Financing of education" was made available to the work committee by Miss H.J. Otto of the HSRC library.

The Chairman, Dr S.S. Brand, undertook the writing of the final report of the work committee. This report was discussed at the meeting on 4 June 1981. Members of the work committee were requested to give notice in writing of any further amendments that they wished to suggest.

THANKS

A word of thanks is extended to all persons who undertook research and support services under great time pressure and consequently ensured that the report of the work committee could be submitted at the set time.

THE ECONOMIC JUSTIFICATION FOR EXPENDITURE ON EDUCATION

1.1 GENERAL PRINCIPLES

Two kinds of justifications are commonly advanced for expenditure on education. One is that education enhances the individual's capacity to enjoy life. The other is that education equips the individual better to produce goods and services.

In so far as the first justification applies, education is in economic terms a consumer good, and the individual will spend as much on it as he sees fit, bearing in mind his available income and the competing uses to which he can put that income. Similarly, in so far as education is seen as a consumer good, state expenditure on education can only be justified to the extent that it is a recognized function of the state to redistribute incomes through its taxing and spending policies.

From the perspective of the second justification, spending on education is in economic terms an investment, yielding a return over time. From the viewpoint of the individual, that return takes the form of a higher total income over his productive life, which must be weighed up against what the education costs him. The cost to the individual of his education is the sum of the direct outlays in money which he makes on his education, and the income foregone by spending a part of his potentially productive life in obtaining an education. A rational decision by the individual to invest in education would require that his return on this investment compares satisfactorily with other uses to which he can put his resources.

There are, however, returns to expenditure on education which do not accrue to the individual being educated, but to other individuals or to society as a whole. These include such imponderables as socially and politically responsible behaviour, but also the direct financial advantages which accrue to employers and fellow workers, and to the state in the form of increased tax revenues from higher incomes, on account of the improved skills of the educated individuals. To the extent that this is true, there is a justification for spending more on education than would be done if each individual only invested as much in his own education as

he considers justifiable on account of the returns which he expects to accrue to him personally.

The justification for state expenditure on education, then, rests partly on the belief that education gives rise to benefits which are external to the individuals being educated, and partly on the acceptance that the state has a responsibility to redistribute incomes, and that one way of doing this is for the state to take upon itself part of the financing of education - even education as a consumer good.

1.2 FACTUAL EVIDENCE

Whatever the justification, the available statistical evidence shows that most countries do in fact devote a significant part of their resources to public expenditure on education. Comparative statistics for different countries usually relate only to direct public expenditure on education, and therefore exclude individual expenditure on education as well as income foregone while studying.

Nonetheless, as appears in Table 1.1, between 5 and 9 % of the gross national products of a representative group of relatively well developed countries was claimed by public expenditure on education in recent years.

Table 1.1

Public expenditure on education as percentages of gross national product and of total spending in selected countries ¹⁾

Country	Year	Public spending on education as % of:	
		GNP	Total public spending
Australia	1976	6,3	16,2
Belgium	1977	6,5	19,2
Canada	1977	8,0	33,2
Denmark	1975	8,2	15,2
Israel	1975	6,8	7,6
Japan	1976	5,3	17,0
Netherlands	1976	8,5	25,4
United Kingdom	1976	6,2	14,3
United States	1976	6,0	17,7
USSR	1977	7,4	12,3
Western Germany	1975	5,2	10,6
RSA	76/77	4,1	15,0

1) UNESCO. Statistical yearbook 1978/79 : 625.

From the fact that public expenditure on education claimed quite significant shares in the total public spending of all these countries, a matter that will be discussed further in Chapter 8 of this report, it would also appear that the arguments in favour of state spending on education are given considerable weight.

Various attempts have been made to relate expenditure on education to the level of economic development achieved in different countries. Generally speaking, a significant positive correlation can be shown to exist between different proxies of educational and economic development. The existence of such a correlation does not, however, in itself prove anything about the direction of causation. It is, for example, noteworthy that education spending made up a lower percentage of the GNP and of total public spending in Japan and in West Germany than in any other country mentioned in the table, except South Africa, although it is generally recognized that the economic performances of these two countries have been better than for most other countries, and although it is the impression of the work committee that the educational systems of those two countries have in many other respects also been more successful than in many other countries.

Attempts have also been made to quantify the contribution which education has made to economic growth in various countries, and to calculate the private (individual) and social returns on investment in education in specific countries. Difficult methodological problems arise, especially in respect of the first and last-mentioned aspects, and it is doubtful whether any firm reliance can be placed on the outcome of such attempts for the purposes of policy formulation. Even although estimates of private returns on investment in education can be regarded as more reliable, they cannot serve as a guide as to where the total expenditure on education in a country stands in relation to the optimal expenditure. Such estimates can, however, be useful in highlighting imbalances in the allocation of education expenditure between different categories of education.

1.3 APPLICATION TO SOUTH AFRICA

As appears from Table 1.2, public expenditure on education made up a rather smaller percentage of the gross domestic product in South Africa in recent years than in the countries for which comparable figures were given in Table 1.1

Table 1.2

Public expenditure on education as percentage of gross domestic product and of total public spending in South Africa ¹⁾

Year ²⁾	Public spending on education as % of:		Public spending on education for Whites as % of total
	GDP	Total public spending	
1973/74	4,1	17,9	72
1974/75	4,0	16,8	67
1975/76	4,2	16,2	69
1976/77	4,1	15,0	69
1977/78	3,8	15,0	67
1978/79	3,7	15,6	65
1979/80	3,4	15,5	63

1) Including self-governing national states, Transkei, Bophuthatswana and Venda for 1973/74 to 1976/77, but thereafter excluding the national states which had become independent.

2) SOUTH AFRICA (Republic). Dept. of Finance. (Statistical information) SOUTH AFRICA RESERVE BANK. (Statistical information)

It cannot necessarily be concluded from these figures that South Africa has been underspending on education. Apart from the fact that the coverage of the available figures on state expenditure on education is not the same for South Africa and each of the other countries mentioned in Table 1.1, so that the percentages are not strictly comparable, it must be noted that as a percentage of total public expenditure, expenditure on education in South Africa has been on a comparable level to that in several of the other countries included in Table 1.1. The fact that in South Africa public spending on education constitutes a lower percentage of the GNP than in the other countries, merely indicates that public spending as a whole constitutes a lower percentage of the GNP here than in several of the other countries mentioned.

Looking at the trend over time, the apparent decline in the percentages in Columns 2 and 3 of Table 1.2 from 1977/78 to 1979/80 must be ascribed at least partly to the fact that as the national states, Transkei and Bophuthatswana, became independent, their education spending was no longer included in the total public expenditure on education in South Africa, but became part of the general transfers of funds from the South African Treasury to theirs. However, the gross domestic product for South Africa still includes the economic activity that takes place within the borders of the independent national states.

Another feature of expenditure on education in South Africa which appears from Table 1.2, is the high proportion of total public spending on education which was claimed by White education, compared to the proportion of Whites in the total population. In a broader context, this disproportion is consistent with the skewness of the income distribution between the main population groups in South Africa, their respective contributions to tax revenue, etc. However, the disproportion may partly explain the lower overall level of public expenditure on education in South Africa compared to some other countries. Also, quite apart from any possible underspending on education in total, it creates a presumption that the allocation of education spending in South Africa between different sections of the community may not be optimal from the viewpoint of obtaining the highest possible returns from a given total investment in education.

If this is actually so, it should show up in estimates of the returns on investment in education for the different population groups. The measurement of social returns on education spending, as already mentioned, presents virtually insurmountable conceptual and statistical problems. However, private returns on education spending can be measured more readily, and large discrepancies between rates of return on spending in different educational categories can be taken as an indication of imbalances in the pattern of education spending. Estimates made by Joubert of the private marginal returns on investment in education at different educational levels for Whites, Coloureds and Asians in South Africa do show, for example, that the return on obtaining matriculation was indeed significantly higher for Coloureds and Asians than for Whites.¹⁾ To the extent that this finding is accurate and can be generalized, it may provide an economic basis for accepting a less skewed distribution of

1) JOUBERT, R.J.O. South African journal of economics 46(4), Dec. 1978 : 396.

educational spending as an objective of education policy in South Africa.

A somewhat different implication can also be drawn from the situation just referred to. Rather than looking at it in terms of the allocation of expenditure between distinctive population groups, it can be seen as the singling out of an elite group for high expenditure on education while the rest of the population had to be content with a lower level of expenditure. It could then be argued that with the same degree of skewness, but with a selection process which would achieve a composition of the elite group that would be more representative of the total population than its present composition, a higher return on the given investment in education would also be realized. It could further be hypothesized that such an approach might yield a higher social return than a more egalitarian approach which would aim at redistributing spending on education between the different population groups. While the available statistics do not provide a basis for discriminating between these two hypotheses, it must be clear that they lead to radically different concepts of parity in public spending on education.

1.4 CONCLUSIONS

In principle a case can be made out on economic grounds for positive expenditure on education, and also for the state to accept responsibility for at least part of that expenditure. However, there are no clearcut empirical grounds for determining the optimum level of expenditure on education in a given society, or the optimum share of the state in that expenditure.

Although available statistics in respect of South Africa may be read to indicate a comparatively low level of public expenditure on education, these figures must be seen against the perspective of a comparatively low overall level of public expenditure. There are, however, grounds for believing that the allocation of public expenditure in South Africa between members of the different population groups has been non-optimal, in the sense that a different distribution may have yielded higher returns on the investment made in education.

Alternatively, maintenance of the present skewness of distribution of expenditure on education between individuals, but with a different selection procedure for entry into the *elite group*, which does not make race, colour, creed or sex a criterion, may have yielded a higher return than either the present pattern or a redistribution of spending between population groups as such.

CHAPTER 2

THE IMPLICATIONS OF THE MAIN COMMITTEE'S PRINCIPLES FOR THE PROVISION OF EDUCATION

2.1 INTERPRETATION OF THE PRINCIPLES

The *Principles for the provision of education in the RSA* which were formulated by the Main Committee, must be taken as guidelines in devising a system of financing of education in South Africa. The implications of these principles for the financing of education can be stated briefly as follows.

Principle 1. Equal opportunities for education, including equal standards in education, for every inhabitant irrespective of race, colour, creed or sex, shall be the purposeful endeavour of the state.

If *equal educational opportunities* is taken to mean equal access to educational facilities of comparable standard, then from the viewpoint of financing, it must imply some concept of parity in the level of financing as between different individuals irrespective of race, colour, creed or sex.

Principle 2. Education shall afford positive recognition of what is common as well as what is diverse in the religious and cultural way of life and the languages of the inhabitants.

This principle, read in conjunction with Principle 6, raises the important question of the extent to which the state must accept responsibility for the financing of education. In operationalizing the concept of equal educational opportunities in financial terms, it is inevitable that financially realistic norms must be set which, if met uniformly for all pupils or students, would determine the financial needs in respect of the provision of education on a functional basis by the state. If provision for the full spectrum of religious, cultural and language expressions is to be made in formulating such norms they are bound to become unrealistic relative to the available financial means. If, however, *positive recognition* is not understood to mean such an all-embracing norm, but to entail a spectrum of educational provision by the state which takes financial constraints into account, then this principle requires that in accordance with Principle 6 the individual and the community must make

some level of financial commitment on their part to supplement what the state must provide.

Principle 3. Education shall give positive recognition to the freedom of choice of the individual, parents and organized society.

From the viewpoint of financing of education, this principle is subject to similar qualifications as Principle 2. Within the financial provision made by the state on the basis of the accepted norms, freedom of choice can be allowed to apply the available funds in accordance with a variety of choices in respect of various aspects of education. However, to the extent that freedom of choice leads to a level of provision that cannot be accommodated within the state's financial provision allowed for by the accepted norms, individuals, parents and organized communities will have to supplement from their own resources the financial provision by the state.

Principle 4. The provision of education shall be directed in an educationally responsible manner to meet the needs of the individual as well as those of society and economic development, and shall, inter alia, take into consideration the manpower needs of the country.

Given the limits on the availability of state financing for education, it is not possible to meet fully all the needs mentioned in this principle. However, the principle gives expression to the points made in Chapter 1 of this report with regard to the different arguments in favour of state expenditure on education, namely that the benefits from such expenditure include both tangible economic and more general cultural benefits, and that those benefits accrue both to the individuals being educated and to society as a whole. The distribution of the state's provision of education financing between different categories of education must therefore reflect the relative values that society places on its different needs, and should not promote some forms of education, aimed at certain needs, to the exclusion of others, aimed at other needs that are also valued by society.

Principle 5. Education should endeavour to achieve a positive relationship between the formal, non-formal and informal aspects of education in the school, society and family.

While similar considerations as those put forward in connection with

Principle 4 also apply here, this principle further draws the attention to the fact that the quality and benefits of education are not determined solely by the quantity and quality of the resources, including financing, which are applied in the formal teaching situation. The socioeconomic background of the pupils or students, and the socioeconomic environment into which graduates of the educational system are released, are also important conditioning factors, and programmes aimed at improvements therein may even compete with education for the available resources. However, one way of compensating for deficiencies in the socioeconomic background of pupils and students is through the provision of non-formal education facilities, which should therefore be provided for in the state financing of education. In communities that suffer from an educational backlog, this could also mean that a larger proportion of available finances will have to be allocated to non-formal education. The common use of physical education facilities would promote this positive relationship between formal, non-formal and informal education and also keep the same costs. Non-formal education ties in more closely with vocational requirements than formal education, thus making an essential contribution to manpower and economic development needs that formal education cannot match. It therefore also qualifies for state financial support, which need, however, not always involve a direct financial outlay by the state, since the direct role that employers play in the provision of this kind of education makes it convenient to provide state support in the form of tax concessions. This, of course, does not take away the fact that non-formal education competes with other forms of education for part of the total financial support the state can provide for education.

Principle 6. The provision of formal education shall be a responsibility of the state, provided that the individual, parents and organized society shall have a shared responsibility, choice and voice in this matter.

The connection between the choice that individuals, parents and organized society can exercise in educational matters, and the share they must take in the financial responsibility for the provision of education, has already been dealt with in the discussion of Principles 2 and 3. The voice that individuals, parents, and sections of organized society can express on educational matters, may, of course, also have an effect on the total financial resources devoted by the state to education, and on the allocation of those resources between different possible educational applications.

Principle 7. The private sector and the state shall have a shared responsibility for the provision of non-formal education.

Although the private business sector also derives benefits from other forms of education, its most direct interest is in non-formal education, and its financial responsibility for the provision of education is therefore most clearly evident in respect of non-formal education. As already pointed out in connection with Principle 5, tax concessions to business entities are an important way in which the state helps to finance non-formal education in particular, and should be taken into account in assessing the relative contributions of the state and the private sector in the provision of non-formal education. Reasonable continuity in the provision of education financing over the economic cycle should be aimed at.

Principle 8. Provision shall be made for the establishment and state subsidization of private education within the systems of providing education.

From the financing viewpoint, the considerations mentioned in connection with Principles 2, 3 and 6 cover in large measure the way in which this principle can be applied in practice. In fact, the interpretation here given to those three principles may mean that from a financing viewpoint, the distinction between public and private education may become less clearcut than under the currently prevailing systems of educational financing in South Africa - as in the public educational system, the state contribution to the financing of private education would be subject to an accepted norm, and the financing of variety and quality that exceed that norm, would be a private responsibility. Whether the state subsidization of private education should be based on the same norms as for public education, is a matter of educational policy about which little if anything can usefully be said on purely financial grounds.

Principle 9. In the provision of education the processes of centralization and decentralization shall be reconciled organizationally and functionally.

This principle has an important bearing on the design of appropriate channels for education financing. Decentralized execution of educational programmes depends on having an assured source of financing at

the level where execution takes place. Such an assured source of financing could be provided by assigning certain revenue sources, such as certain taxes, to the educational authorities at that level, but it need not be done in this way. An assured source of financing can also be provided by retaining control over revenue sources at the centralized level, but arranging for financial transfers from the centralized to decentralized levels according to an agreed formula, incorporating educational norms such as referred to in the discussion of Principle 1.

Neither of these approaches can provide a completely assured financing base, since revenues under the first approach would fluctuate with general economic conditions, and the transfers under the second approach would be vulnerable to alterations made in accordance with the weighing of priorities at the centralized level. In South Africa, the second approach has the advantage from the viewpoint of strategies of change, of not depending on fundamental structural changes in the country's tax system which cannot be expected to be made in the short term.

Principle 10. The professional status of the teacher and lecturer shall be recognized.

Salary levels, and other conditions of service with financial implications, which are included in the accepted norms on which the state's contribution to the financing of education is to be based, will have a bearing on the professional status of teachers and lecturers, but that status is also a function of a variety of non-financial factors.

Principle 11. Effective provision of education shall be based on continuing research.

It is a condition for the effective application of funds in any area of endeavour that a portion of the funds be applied towards research in that field of endeavour. In the South African context such funds can be made available by including some provision for research in the overall contribution of the state towards the financing of education, and by giving an appropriate priority to research on education in the allocation of the state's overall research budget.

2.2 CONCLUSIONS

The overriding implication of the principles for the provision of Education is that the provision of education of equal quality requires as a necessary condition parity in some way or other in the level of financing as between different individuals irrespective of race, colour, creed or sex. In operationalizing this requirement in financial terms, it is inevitable that realistic norms be set to determine the financial needs in respect of the provision of education, in particular as far as the state's responsibility in meeting those needs is concerned.

The responsibility that the state can realistically be expected to assume in respect of the financing of education, is constrained by the overall capacity of the economy and by the claims of other community needs as related to educational needs, and if they are not met, this could have a negative effect on the effectiveness of spending on education.

To bridge the gap which therefore exists between the financial contribution of the state to the provision of education, on the one hand, and the variety of educational needs, on the other, some level of financial commitment is required on the part of the individual, and of the community to supplement the state's contribution.

In allocating the financial resources available for spending on education between different kinds of education, expression must be given to the relative values which society places on the general formative role of education, on manpower needs, on economic development, and on other needs of communities.

Finally, in choosing channels for education financing with a view to achieve whatever balance between centralized and decentralized provision of education is considered to be desirable, account should be taken of the revenue sources available to educational management structures at the various levels.

A STATISTICAL SURVEY OF THE PRESENT EDUCATIONAL SITUATION

3.1 CATEGORIES OF EDUCATION COVERED

Three reports, all prepared by the Institute for Educational Research of the HSRC, served as the statistical base for the investigation into the financing of education. These reports dealt, respectively, with the basic demographic facts and the number of primary and secondary school pupils; ¹⁾ with post-school and tertiary education; ²⁾ and with education for handicapped pupils. ³⁾ With the exception of pre-primary education, the full spectrum of educational categories for all the population groups in the country were covered.

3.2 GEOGRAPHICAL SCOPE

At the time of the investigation the Republics of Transkei, Bophuthatswana and Venda had attained independence, and Ciskei had already made known its intention to accept independence. However, it was accepted that from the financing viewpoint, the statistical picture must include these independent states, and any others which may become independent from the RSA in future. This is necessary in view of the fact that educational norms in these states are affected by those in the RSA, and that the development of significant qualitative discrepancies between educational services in these states and those in the RSA would tend to give rise to migration of the school-age population between these states and the RSA.

3.3 THE TOTAL AND SCHOOL-GOING POPULATION

For the purpose of the investigation the composition of the South African population (including the above-mentioned independent states) was estimated as given in Table 3.1.

- 1) VAN NIEKERK, C. & BEZUIDENHOUT, D.J. Opgawe van leerlingtalle en personeel vir alle bevolkingsgroepe met projeksies tot 2020.
- 2) VAN NIEKERK, C. et al. Statistiek ten opsigte van na-skoolse en tersiêre opleiding.
- 3) VAN NIEKERK, C. et al. Onderwys vir sintuiglik-, neuraal-, verstandelik gestremde en pedagogies verwaarloosde of gedragsafwykende leerlinge : voorkoms en projeksies van leerlingtalle.

Table 3.1

South African population (including independent states previously part of RSA) in 1980 by population group ¹⁾

Population group	Number	Per cent
Asians	813 050	2,98
Blacks	19 471 630	71,27
Coloureds	2 538 870	9,29
Whites	4 496 430	16,46
Total	27 319 980	100,00

1) VAN NIEKERK, C. & BEZUIDENHOUT, D.J. Opgawe van leerlingtalle en personeel vir alle bevolkingsgroepe met projeksies tot 2020.

In Table 3.2 the number of pupils of each population group registered in 1978 in ordinary primary and secondary schools is given, with Standard 5 included in the primary division.

Table 3.2

Numbers of pupils in ordinary primary and secondary schools in South Africa (including independent states previously part of RSA) by population group in 1978 ¹⁾

Population group	Primary		Secondary		Total	
	Number	% of total	Number	% of total	Number	% of total
Asians	147 561	3,0	59 927	5,3	207 488	3,4
Blacks	3 608 577	72,7	615 074	53,9	4 223 651	69,2
Coloureds	602 983	12,1	119 068	10,4	722 051	11,8
Whites	605 630	12,2	346 546	30,4	952 176	15,6
Total	4 964 751	100,0	1 140 615	100,00	6 105 366	100,0

1) Ibid.

In comparing the percentages in Tables 3.1 and 3.2, the differences can be attributed to both the age distributions and the educational participation rates of the various population groups. The most significant

discrepancy that can be observed is the relative underrepresentation of Blacks at the secondary school level, where they made up only 53,9 % of the school enrolment in 1978 compared to the 71,3 % share of Blacks in the total population in 1980. (The extent to which Blacks are statistically underrepresented is actually more marked, since a larger proportion of Blacks than Whites, for example, are in the school-going age groups.)

These demographic statistics must be read in conjunction with figures on educational spending. According to a study commissioned by the Work Committee: Education financing, 6,1 % of total public spending on education in South Africa in the financial year 1978/79 was spent on education for Asians, 16,3 % on education for Blacks, 12,7 % on education for Coloureds, and 64,5 % on education for Whites.¹⁾ Even allowing for a substantial margin of error in these figures, they indicate that spending on Black education is disproportionately low, and on White education disproportionately high, not only in relation to the respective proportions of Blacks and Whites in the total population, but also in relation to their respective proportions in the schoolgoing population. This focuses the attention on the vexed question of unit spending on education.

3.4 UNIT SPENDING ON EDUCATION

Figures are often quoted, comparing the unit costs of education for the different population groups. The Work Committee: Education financing had an interest in these estimates mainly in so far as a knowledge of unit costs can contribute towards estimates of the financial implications of a movement towards parity in education.

Virtually all estimates of this nature are not estimates of the total unit costs of education, since they do not include provision for the opportunity costs of education, i.e. the income foregone by pupils and students while undergoing their education. Also the estimates rarely, if ever, include provision for direct expenditures on education by pupils or their parents. The estimates are, therefore, usually estimates only of direct public spending on education per educational unit.

1) NIEUWENHUIZEN, P.J. et al. Bron en aanwending van fondse in die onderwys met spesiale verwysing na die bevordering van pariteit tussen die verskillende volkere-groepe : 5.

Even in this limited sense difficulties arise, especially in comparing the unit spending between population groups which are served by different educational systems. One reason for this is that public spending on education is channeled not only through those government departments which are directly responsible for education, such as the provincial administrations and the Departments of Education and Training and of Internal Affairs in South Africa, but also through other departments which render various services to education, such as the public works, health, and transport departments.

From a document submitted to the work committee by the Institute for Educational Research of the HSRC, ¹⁾ it appears that in addition to such difficulties of statistical coverage, differences in the unit spending on education between different population groups can be explained by a variety of factors. Some of these may reflect real differences in the quality of education enjoyed by the different population groups, but others quite clearly do not.

Among the factors which do not reflect differences in the quality of education enjoyed, are the differing age distributions of the various population groups. Since the Black population, for example, has a much larger proportion of children in the primary-schoolgoing ages than the White population, and the spending per pupil is typically lower in primary than in secondary schools, the average spending for all pupils would be lower for Blacks than for Whites even if there were no differences between Blacks and Whites in the spending per pupil at the primary and secondary levels, respectively.

Among the factors which affect average spending per pupil, and which do reflect real differences in the quality of the education provided, are differences in the availability of educational facilities (reflected, for example, in double-shift classes for some but not for other population groups) and in the quality of those facilities; differences in the spectrum of subjects offered, and differences in teachers qualifications and salaries.

Although the Work Committee: Education financing did give some atten-

1) VAN NIEKERK, C. Enkele opmerkings oor faktore en probleme wat die berekening en vergelyking van eenheidskoste van die onderwys beïnvloed.

tion to the calculation of unit spending on education, it did not consider it as its task, in the time available, to resolve the difficulties involved in arriving at truly comparable estimates for the different population groups.

As will appear later, the method used by the work committee to arrive at its projections of the financial requirements of education, did not require such comparable figures for all the population groups. It was, however, considered to be important that the various educational authorities, who had already given some attention to the matter, take further steps to make available regular and scientifically based statistics on unit educational spending for meaningful categories of pupils.

Such statistics should, as far as possible, be comparable in that their coverage of items and sources of financing must be similar for the groups being compared, and they should be published according to categories which are indeed comparable as far as, for example, levels of schooling are concerned. Preferably they should also be itemized in such a way that a clear indication can be had of the causes of differences in the levels of unit spending between the groups being compared.

3.5 POST-SCHOOL AND TERTIARY EDUCATION

The educational institutions covered under this heading are technikons, technical colleges and institutes, teacher training colleges and universities.

There are at present seven technikons for Whites in South Africa, which in 1978 took in 18 773 full-time and 19 381 part-time students and 6 590 students who attended specific courses. There is one technikon for Coloureds, which had 1 356 students enrolled in 1980, and one for Asians, which had 6 827 students enrolled in 1978, including however some pre-matriculation students. Only two technikons for Blacks are already taking in students, and both were opened within the past two years.

Technical colleges and institutes provide mainly training at the pre-matriculation level, but some provide courses at the tertiary level as well. There were 28 technical colleges and 37 technical institutes for Whites in 1980, and in 1978 a total of 62 612 White students were enrolled in such institutions, out of which 19 279 were full-time students.

In 1978 there were five technical colleges, two college branches and three technical institutes for Coloureds, and in 1977 3 733 Coloured students were enrolled in these institutions. Apart from the institution already mentioned, there are no technical colleges or institutes specifically for Asians, and in 1979 there were 16 technical institutes for Blacks, with a total of 2 859 students receiving trade training.

Teacher training colleges for Whites consist of 17 provincial colleges, two colleges for continued training, and one for the training of pre-primary teachers. In 1980 a total of 13 875 White students were enrolled in these institutions. In the same year, 5 380 students were enrolled in the 14 teacher training colleges and schools for Coloureds, and 1 131 in the two for Asians. In 1979, 14 356 students were enrolled in 37 teacher training colleges and schools for Blacks, excluding those in the independent states. The Black and Coloured teacher trainees included some who had not reached the matriculation level.

The position as far as university training is concerned, is reflected in Table 3.3.

Table 3.3

Student numbers at universities in South Africa in 1978, per population group ¹⁾

Population group	Residential		Unisa		Total	
	Number	Per cent	Number	Per cent	Number	Per cent
Asians	5 547	6,0	3 927	7,5	9 474	6,5
Blacks	5 267	5,7	7 796	14,9	13 063	9,0
Coloureds	3 783	4,0	2 420	4,6	6 203	4,3
Whites	78 418	84,3	38 257	73,0	116 675	80,2
Total	93 015	100,0	52 400	100,0	145 415	100,0

1) VAN NIEKERK, C. et al. Statistiek ten opsigte van naskoolse en tersiêre opleiding.

Although the statistics are incomplete, and in some respects not comparable between the different population groups, it is evident that at the tertiary education level, the percentage of White students is much higher, and the percentages of the other population groups in general

lower, than the percentages of these respective population groups in the total population. *Underrepresentation* at the tertiary education level is particularly evident in the case of Blacks.

3.6 EDUCATION FOR HANDICAPPED PUPILS

A report was prepared for the Work Committee: Education financing on the incidence of handicapped pupils. The available statistics are incomplete, but indicate that in 1978 there were some 16 500 handicapped pupils at school in South Africa (excluding the independent states formerly part of the RSA). Of these, some 11 600 were Whites, 2 400 Blacks, 2 050 Coloureds, and 328 Asians. There is reason to believe that even among Whites, the formal school enrolment of handicapped children considerably understates the incidence of handicapped children in the school-age population. Judging by the relatively small numbers of handicapped pupils from the other population groups enrolled at schools, the underreporting of handicapped children is much more significant among these population groups than among the White population.

3.7 PRE-PRIMARY EDUCATION

The provision of pre-primary education differs substantially between the different educational authorities, and this makes it particularly difficult to obtain reliable and consistent statistics on this form of education that would be comparable between the different population groups. The following statistics were compiled from various sources by the HSRC Institute for Educational Research.

Table 3.4

Numbers of pupils in pre-primary schools and crèches in South Africa in 1978 ¹⁾

Population group	Number	% of total	Number as % of children in age group three to six years
Asians	500	0,7	0,59
Blacks	12 841 ²⁾	17,8	0,32
Coloureds	6 565	9,1	2,45
Whites	52 419	72,4	15,47
Total	72 325	100,0	1,55

1) HUMAN SCIENCES RESEARCH COUNCIL. Institute for Educational Research. (Statistical information).

2) In crèches.

On general socioeconomic grounds it could be expected that the need for this kind of education is the strongest among Blacks and Coloureds. However, the figures in Table 3.4 indicate that Blacks are vastly underrepresented as far as participation in pre-primary education is concerned, and that Whites make much more use of this level of education relative to the potential pre-primary population than any of the other population groups. The impression gained from Table 3.4 is that participation in pre-primary education in South Africa is more strongly a function of socioeconomic status than of the need for this form of education as expressed in the discussion of Principle 5 in Chapter 2 of this report.

3.8 TEACHERS IN ORDINARY SCHOOLS

Certain statistics about the teacher population in a recent year are given in Table 3.5.

Table 3.5

Numbers of teachers and pupil-teacher ratios in ordinary schools in South Africa per population group in 1978¹⁾

Population group	Number	Per cent	Pupil-teacher ratio
Asians	7 526	5,3	27,21
Blacks ²⁾	64 049	44,7	48,47
Coloureds	24 461	17,1	29,52
Whites	47 233	32,9	20,16
Total	143 269	100,0	

1) VAN NIEKERK, C. & BEZUIDENHOUT, D.J. Opgawe van leerlingtalle en personeel vir alle bevolkingsgroepe met projeksies tot 2020.

2) Excluding Transkei, Bophuthatswana and Venda.

In this as in other respects, the relative underrepresentation of Blacks in the teacher population, compared to their share in the total population, is evident, while the other three population groups are each overrepresented in the teacher population. In the cases of Asians and Coloureds, this may be a reflection of the fact that teaching has been an avenue of 'vertical mobility' in the job structure in which these population groups were least restricted in the past.

Together with the pupil numbers given earlier, the statistics on teachers can be used to arrive at pupil-teacher ratios for the different population groups. Despite the relative underrepresentation of Blacks in the pupil population, the average pupil-teacher ratio for this population group is more than twice as high as for Whites, and substantially higher than for the other two population groups, for which it is also significantly higher than in the case of Whites.

It should also be noted that these figures as such give no indication of the level of training reached by teachers in the different population groups. Some information on this point is provided in Table 7.

Table 3.6

Distribution of teachers' qualifications in South Africa per population group in 1978 ⁴⁾

Qualification	Asians ¹⁾	Blacks ¹⁾	Coloureds	Whites ²⁾
	Per cent			
<u>With education certificate</u>				
Degree	20,5	2,4	4,5	34,3
Std 10	66,2	16,1	34,2	65,7
Std 8	13,3	62,9	60,3	-
Std 6	-	18,6	1,0	-
Total	100,0	100,0	100,0	100,0
<u>Without education certificate</u>				
Degree	5,2	1,4	7,4	32,2
Std 10	54,8	13,9	29,2	67,8
Std 8	40,0	84,7 ³⁾	30,0	-
Std 6	-	-	33,4	-
Total	100,0	100,0	100,0	100,0
With education certificate	95,1	80,9	87,5	96,6
Without education certificate	4,9	19,1	12,5	3,4
Total	100,0	100,0	100,0	100,0

1) Figures include qualifications of lecturers at teachers' training colleges.

2) Cape of Good Hope Education Department only.

3) Std 8 and lower qualifications.

4) VAN NIEKERK, C. et al. Onderwys vir sintuiglik-, neuuraal-, verstandelikgestremde en pedagogies verwaarloosde of gedragsafwykende leerlinge : voorkoms en projeksies van leerlingtalle.

The distribution of educational qualifications within each population group shows that there are large discrepancies between Whites and Blacks in particular, with Asians being less well provided than Whites but better than Coloureds, who are in turn better provided than Blacks, in so far as the qualifications of their teachers are concerned. The differences between Black and White, for example, in respect of the relative numbers of teachers available, are thus reinforced by differences in the quality of the teachers, in so far as teachers' quality is reflected in the qualifications of teachers.

3.9 CONCLUSIONS

The brief statistical picture of the present educational situation in South Africa which was presented in this chapter, underlines the educational disparities between the different population groups that were touched upon in Chapter 1.

As far as participation in formal education is concerned, Blacks are markedly underrepresented at all levels of education, but increasingly so as the level of education rises. For Asians and Coloureds, the particular statistics used in this chapter do not reveal such striking disparities as in the case of Blacks except that Coloureds appear to be markedly underrepresented at university level, and Asians in so far as education for the handicapped is concerned. In some respects these two population groups can even be said to be *overparticipating*.

However, the higher pupil-teacher ratios in the case of Asians and Coloureds, and particularly in the case of Blacks, and the differences in the distribution of teachers' qualifications within the different population groups, suggest that disparities should not only be measured in terms of participation rates, but also in terms of the provision of those educational facilities which determine the quality of education enjoyed by those who do participate.

THE PROJECTED DEMOGRAPHIC DEMAND FOR EDUCATION

4.1 ORDINARY PRIMARY AND SECONDARY EDUCATION

The population projections prepared for the Investigation into Education by the HSRC Institute for Educational Research, and the projections of pupil numbers per population groups based thereon, were used as the basis for the projections of financial requirements for education. The relevant projections of pupil numbers are summarized in Table 4.1.

Table 4.1

Low and high projections of numbers of pupils in ordinary primary and secondary schools in South Africa per population group, 1980 to 1990 ¹⁾

Population group	Year	Primary		Secondary		Total	
		Low	High	Low	High	Low	High
Asians	1980	151 764	151 786	65 321	65 331	217 085	217 117
	1985	157 576	157 593	78 493	78 501	236 069	236 094
	1990	159 157	161 036	85 437	86 445	244 594	247 481
Blacks ²⁾	1980	3 851 803	3 874 963	693 097	697 265	4 544 900	4 572 228
	1985	4 377 939	4 471 705	989 813	1 011 013	5 367 752	5 482 718
	1990	4 816 908	5 032 878	1 329 459	1 389 067	6 146 367	6 421 945
Coloureds	1980	610 021	610 054	128 951	128 957	738 972	739 011
	1985	597 027	597 047	156 320	156 325	753 347	753 372
	1990	583 780	590 514	183 242	185 355	767 022	775 869
Whites	1980	618 775	618 789	355 674	355 682	974 449	974 471
	1985	621 511	622 407	357 247	357 761	978 758	980 168
	1990	595 046	603 556	342 034	346 926	937 080	950 482
Total	1980	5 233 363	5 255 592	1 243 043	1 247 235	6 476 396	6 502 827
	1985	5 754 053	5 848 752	1 581 873	1 603 600	7 335 926	7 452 352
	1990	6 154 891	6 387 984	1 940 172	2 007 793	8 095 063	8 395 777

1) VAN NIEKERK, C. & BEZUIDENHOUT, D.J. Opgawe van leerlingtalle en personeel vir alle bevolkingsgroepe met projeksies tot 2020.

2) Including independent states formerly part of the RSA.

The most striking feature of the projections is the divergent tendencies for the different population groups. Whereas the projections suggest that both the primary and secondary White school population may reach a maximum and start declining within the decade, the school populations from all three of the other groups are projected to keep rising - the only exception being the Coloured primary school population. However, the projected rate of increase of the Black school population is far in excess of that for the Asians and Coloureds. Given, moreover, the numerical preponderance of the initial Black school population, the projected increase in the Black school population between 1980 and 1990, namely 1 601 467 according to the low, and 1 849 717 according to the high projection, is not much less than the estimated total 1980 school population of some 1 930 500 for the other three population groups together, and almost twice the estimated White 1980 school population. The fact that the population group which is at present the furthest behind in terms both of participation in education and provision of educational facilities, is set to show such a relatively large growth in school population during the coming decade, must of necessity have far-reaching consequences for the financing of education.

4.2 POST-SCHOOL AND TERTIARY EDUCATION

Because, inter alia, of the incomparability over time of the available statistics on student numbers at technikons, technical colleges and institutes, no attempt was made to project the number of students who will attend these kinds of institutions. The emphasis which has recently come to be placed on technical training to meet the country's manpower needs, and the tendency to give increased recognition to diplomas and certificates obtained through these institutions point towards a rapid rate of growth in the number of students from all population groups attending them.

Projections of the number of teacher trainees were also not made on the basis of historical trends, since the demand for teachers is influenced strongly by norms applied in the provision of educational facilities, in particular with regard to pupil-teacher ratios and minimum teaching qualifications. Rather than projecting teacher trainee numbers in their own right, they can therefore better be derived from projections of pupil numbers and from targets set in respect of pupil-teacher ratios and teachers' qualifications.

University student numbers were projected by the HSRC Institute for Educational Research for purposes of the investigation on the basis of demographic variables, and the main relevant results of these projections are presented in Table 4.2.

Table 4.2

Projections of university student numbers in South Africa per population group, 1980 to 1990 ¹⁾

Population group	Year	Residential	Unisa	Total
Asians	1980	6 160	5 145	11 305
	1985	8 714	8 055	16 769
	1990	12 243	10 157	22 400
Blacks ²⁾	1980	6 928/ 8 485	10 687	17 615/ 19 172
	1985	9 261/ 12 066	19 584	28 845/ 31 650
	1990	11 593/ 15 712	28 264	39 857/ 43 976
Coloureds	1980	5 266	2 822	8 088
	1985	8 240	3 789	12 029
	1990	10 021	5 395	15 416
Whites	1980	86 803	37 404	124 207
	1985	96 894	45 175	142 069
	1990	113 417	47 773	161 190
Total	1980	105 157/106 714	56 058	161 215/162 772
	1985	123 109/125 914	76 603	199 712/202 517
	1990	147 274/151 393	91 589	238 863/242 982

1) VAN NIEKERK, C. et al. Statistiek ten opsigte van na-skoolse en tersiëre opleiding.

2) Since birth statistics, which formed the basis of the projections for Asians, Coloureds and Whites, were not available for Blacks, two methods of projection were used in respect of Blacks at residential universities, namely a linear extrapolation of student numbers and a linear extrapolation of student number per 1 000 of the population, which was then converted to student numbers. The first method yielded the lower, and the second, the higher projection.

It must be noted that these projections all basically reflect historical tendencies, and that no provision is thus made in them for any attempted acceleration in the participation by Asians, Blacks and Coloureds in

university education. Although it may be realistic not to assume any major departures from historical tendencies within a ten-year timespan in so far as university education is concerned, this feature of the projections means that any financial requirements projected on the basis thereof, must be considered as minimum requirements.

4.3 EDUCATION FOR HANDICAPPED PUPILS

From what was said in Chapter 3 about the statistics on formal enrolment of handicapped pupils, it should be clear that no reliable basis exists for projecting the numbers of pupils who will be in need of special education for the handicapped. Projections were nevertheless prepared for purposes of the investigation by type of handicap, using incidence ratios obtaining for the White population as a basis of projections for the other population groups. Since many of the handicaps in question are closely related to social conditions, their incidence among the different population groups can in fact be assumed to vary significantly. The projections arrived at in this manner can, therefore, at best only be used to obtain some sense of the extent of the educational facilities required to cater for this need, but by no means as a basis for detailed planning.

4.4 CONCLUSIONS

Of the different educational categories considered, the available statistical information is most complete and detailed for ordinary primary and secondary schools and, among the tertiary institutions, for teachers' training colleges and universities. It is only in respect of these institutions, therefore, that a sound basis exists for making statistical projections of needs.

Over the timespan of ten years considered in this chapter, the projections suggest that the demand for ordinary educational facilities at the primary school level is set to decline in the case of Whites and Coloureds, but to increase among both other population groups. At the secondary school level, the demand is projected to decline only among Whites, but to increase for all three of the other population groups. Both in terms of growth rates and of absolute numbers, the projected increases are far and away the largest for Blacks, who at present show the largest backlogs both in terms of participation in educational activities, and provision thereof. The demand for places at teachers' train-

ing colleges will be determined by the extent to which these projections with regard to pupil numbers at primary and secondary schools are realized.

At university level, the growth rates in the numbers of students are projected to be the highest for Asians, Blacks and Coloureds, but in absolute numbers the projected growth is still the highest for Whites in the timespan of a decade which was considered.

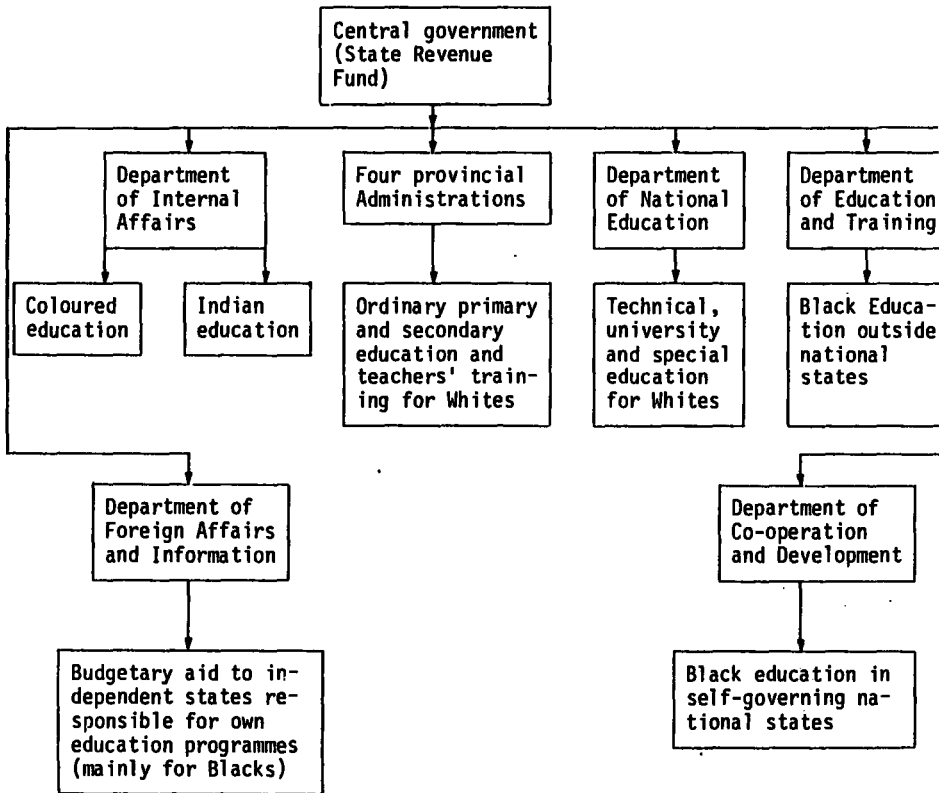
DIRECT FINANCIAL REQUIREMENTS OF PROJECTED DEMOGRAPHIC DEMAND WITH PARITY OBJECTIVES

5.1 PRESENT STRUCTURE OF FINANCING

The present structure of educational financing in South Africa is presented in simplified form in Diagram 1.

Diagram 1

STRUCTURE OF STATE EDUCATIONAL FINANCING IN SOUTH AFRICA, 1981¹⁾



1) NIEUWENHUIZEN, P.J. et al. Bron en aanwending van fondse in die onderwys met spesiale verwysing na die bevordering van pariteit tussen die verskillende volkere-groepe : 2.

As can be seen, the financing structure can be characterized as highly centralized, in that the central government is the main financing source for all state-provided categories of education, even although the actual execution of educational programmes is highly decentralized among a variety of departments and authorities. This picture is further accentuated by the fact that all three of the independent states which were formerly part of the RSA, and whose governments are responsible for education inside their borders, receive budgetary assistance in varying degrees from the State Revenue Fund of the RSA through the Department of Foreign Affairs and Information.

The flow of funds from the State Revenue Fund to the various educational systems takes place according to different principles. As far as Coloured and Indian education are concerned, the funds are voted on the budget of the Department of Internal Affairs, which is also responsible for a variety of other functions. Funds for technical, university and special education for Whites, and for Black education outside the national states, are voted on the budgets of two central government departments whose primary responsibilities are these categories of education. Funds for ordinary primary and secondary education and teachers' training for Whites are transferred directly from the State Revenue Fund to the budgets of the four provincial administrations, and for Black education in self-governing national states, to the budgets of those states through the Department of Co-operation and Development. In a rather similar way, funds are channeled from the State Revenue Fund of the RSA to the budgets of independent states through the Department of Foreign Affairs and Information in the form of budgetary aid, and part of these funds is, of course, spent on education.

This large variety of channels along which funds flow to the financing of education for the different population groups, makes it very difficult to draw valid comparisons between the adequacy or otherwise of the financial flows going to the different educational programmes. It is, therefore, also not surprising that the norms according to which funds are channeled from the State Revenue Fund to these various educational institutions, vary a great deal. Within the prevailing budgetary system, historical levels of funding are an important determinant of new fund allocations, but in recent years there have been purposeful attempts to step up the growth rates of allocations for Asian, Black and Coloured education.

The most sophisticated formal financing arrangements have been developed in respect of ordinary primary and secondary education, and university education, for Whites. Also, the most reliable statistical projections for all population groups were available for ordinary primary and secondary education. The Work Committee: Education financing therefore decided to use the formula employed in the financing of White primary and secondary education as the basis for assessing the financial implications of parity objectives in education. A brief description of this formula will now be given, followed by an exposition of the procedure adopted by the work committee.

5.2 OUTLINE OF PROVINCIAL SUBSIDY FORMULA AS APPLIED TO EDUCATION ¹⁾

The basic aim of the provincial subsidy formula is to calculate the financial needs of each provincial administration with a view to performing the functions assigned to them in the Constitution, among which are education; to estimate the ability to pay of each administration, based on their own sources of revenue; and by subtraction, to determine the shortfall which arises for each administration, and which must be financed by a transfer or subsidy from the State Revenue Fund.

In arriving at this external financing requirement account is also taken of the effect which the growth rate of the national economy and the inflation rate may have on the central government's ability to pay, as well as on the financial needs of the provincial administrations. Furthermore, in arriving at estimates of the expenditure needs and revenue potentials of the four administrations, an attempt is made to take account of systematic or structural differences.

Raw pupil numbers are also adjusted to take account of factors such as population density, hostel attendance, etc., and from this adjustment estimates of the numbers of *standard pupils* are arrived at.

The estimate of financial need for each province is then based on the unit cost of education (standard expenditure divided by number of standard pupils for all four provinces), the estimated number of standard pupils in the province, and a price index in respect of educational costs.

1) BUURKE, P.F. & DEDNAM, E.H. Beraming van onderwysbesteding ten opsigte van primêre en sekondêre onderwys indien die subsidieformule soos van toepassing op Blanke provinsiale onderwys vir die onderwys van alle bevolkingsgroepe toegepas sou word.

The work committee was primarily interested in assessing the financial implications of moving towards parity objectives in education, and wished to use the provincial subsidy formula as an instrument in making such an assessment. Therefore it did not see it as its task to evaluate the formula as such, even although some members of the committee may have felt that certain improvements in the formula would be desirable.

5.3 PROCEDURE FOR ASSESSING IMPLICATIONS OF PARITY OBJECTIVES 1)

The purpose of the calculations was to determine, with regard to ordinary primary and secondary education, what the financial implication would be if the objective was set to achieve parity between the different population groups by 1990 as far as state expenditure per comparable pupil is concerned.

For this purpose, the lower population growth projection prepared by the HSRC Institute for Educational Research was used for the years 1980, 1985, and 1990, with estimates interpolated for the individual years between these years. The institute's projections of pupil-age group ratios and secondary-primary pupil ratios were also used in a similar way.

Total education expenditure was then estimated for each year by multiplying the projected numbers of primary and secondary pupils in that year by fixed amounts, based on the expenditure per pupil calculated for White provincial education - for the financial year 1979/80, these amounts were R534,02 and R960,15 per primary and secondary pupil, respectively. 2) It is important to note that no capital expenditures were included in these amounts, nor were any expenditures incurred in maintenance to school buildings, hostels, or school grounds. The figures are gross figures, in the sense that diverse departmental revenues, such as examination fees and repayment of bursaries, were not subtracted from them. The non-recoverable training costs of teachers were included, but no bursary funds, which would have pushed the figures up by R16,29 a pupil overall.

1) BUURKE, P.F. & DEONAM E.H. Beraming van onderwysbesteding ten opsigte van primêre en sekondêre onderwys indien die subsidieformule soos van toepassing op Blanke provinsiale onderwys vir die onderwys van alle bevolkingsgroepe toegepas sou word.

2) These averages conceal the important fact that there is a wide variation in expenditure per pupil within the educational system for Whites in different areas, for example, the figures in rural areas are much higher, and in urban areas, much lower than the average figures.

Significant differences obtain initially between the different population groups in respect of such factors as pupil-teacher ratios, qualifications of teachers, and teacher salaries. These differences cannot be eliminated overnight, but can at best be reduced over a certain timespan. In the estimates, these differences were therefore adjusted from year to year to reach parity by 1990.

To illustrate the sensitivity of the financing requirements for one of these factors, five scenarios were projected with regard to pupil-teacher ratios. The results of these projections appear in Table 5.1.

Table 5.1

Estimated financial requirements of parity in education with different pupil-teacher ratios, 1980 to 1990 ¹⁾

Year	Scenarios ²⁾					
	1	2	3	4	5	6
	R million (constant 1979/80 prices)					
1980	2 150	2 150	2 150	2 150	2 150	2 150
1985	2 915	3 026		2 762		
1990	4 347	5 282	4 531	4 031	3 406	4 020

1) BUURKE, P.F. & DEDNAM E.H. Beraming van onderwysbesteding ten opsigte van primêre en sekondêre onderwys indien die subsidieformule soos van toepassing op Blanke provinsiale onderwys vir die onderwys van alle bevolkingsgroepe toegepas sou word.

2) Scenarios:

1. Pupil-teacher ratio of 30 : 1 reached for Blacks by 1990, as against 20 : 1 for all other population groups.
2. Pupil-teacher ratio of 20 : 1 reached for all population groups by 1990.
3. Pupil-teacher ratio of 25 : 1 reached for all population groups by 1990.
4. Pupil-teacher ratio of 30 : 1 reached for all population groups by 1990.
5. Pupil-teacher ratio of 40 : 1 reached for all population groups by 1990.
6. Pupil-teacher ratio of 25 : 1 for Asians and Coloureds, 40 : 1 for Blacks, and 20 : 1 for Whites in 1990.

In all scenarios differences in teacher qualifications and salaries between population groups are eliminated by 1990.

The differences between the columns in Table 5.1 underline an important principle, namely that the financial implications of parity objectives are very sensitive to the choice of parity norms. If, for example, the present pupil-teacher ratio for Whites is accepted as the parity norm for all population groups, as in Column 2, the projected educational expenditure in 1990 is R1 250 million, or more than a quarter higher than if a norm of 30 : 1 is accepted for all population groups (including Whites), as in Column 4. One way to bring the financial implications of expenditure parity within realistic bounds could therefore be not to accept present norms in respect of White education as the objective, but to adjust those norms. In making such adjustments, account will have to be taken of sound educational principles, without imposing these as absolute imperatives.

Another factor which is of course, variable, is the period over which the chosen parity objective is aimed at. If the different pupil-teacher ratios used for the scenarios in Table 5.1 are to be achieved over twenty instead of over ten years, the results are as in Table 5.2.

Table 5.2

Estimated financial requirements of parity in education with different pupil-teacher ratios, 1980 to 2000

Year	Scenarios ¹⁾					
	1	2	3	4	5	6
	R million (constant prices)					
1980	2 150	2 150	2 150	2 150	2 150	2 150
1985						
1990	4 103	4 324	4 107	3 937	3 632	3 876
2000	5 199	8 420	5 485	4 877	4 082	4 461
Percentage of parity achieved by						
1980	41,3	33,4	39,1	43,8	52,6	48,2
1985						
1990	78,9	67,4	74,9	80,7	89,0	86,9
2000	100,0	100,0	100,0	100,0	100,0	100,0

1) Same as in Table 5.1 but spread over twenty instead of ten years.

It appears from Table 5.2 that the financial requirements in the forthcoming years can be considerably reduced for each parity objective if that objective is aimed at over a longer period. If both the pupil-teacher ratio and the period are adjusted, the effect on the financial requirements is even more striking.

Table 5.2 also shows how the stretching of the movement towards parity over a longer period affects the extent to which progress towards parity is made in the earlier years, for each scenario.

It must again be pointed out that the financial projections presented here, include provision for pupils in the three independent states which were previously part of the RSA. In 1980, the exclusion of these pupils from the calculations would have made possible a *saving* of R218,83 million. However, in view of the considerations mentioned earlier in this report, the work committee held the view that its projections of financial requirements should take full account of the requirements in those states as well.

5.4 FINANCIAL IMPLICATIONS OF PROVIDING EQUAL QUALITY SCHOOL ACCOMMODATION

The foregoing financial projections refer only to current expenditure on education, and do not include estimates of the financial requirements of eliminating existing disparities in the availability of school buildings and the physical facilities, and of keeping up with current needs in respect of facilities of equal quality. Estimates of the capital expenditure required to meet these needs were prepared by the Work Committee: Building services, and those estimates are summarized in Table 5.3

Table 5.3

Estimated financial requirements of eliminating present backlogs and keeping up with projected population growth, within the context of a programme to provide facilities of equal quality over different periods of time ¹⁾

Period of time for elimination of backlog	Expenditure per annum	
	Lower limit	Upper limit
	R million	
5 years : 1980-1985	503,5	641,0
10 years : 1980-1985	319,4	408,8
1986-1990	311,8	400,5
15 years : 1980-1985	258,0	331,5
1986-1990	250,4	323,1
20 years : 1980-1985	227,3	292,8
1986-1990	219,7	284,4

1) HUMAN SCIENCES RESEARCH COUNCIL. Investigation into Education. Work Committee : Building Services. Report : table 16.

Unlike the current expenditure estimates presented earlier in this chapter, the estimates in Table 5.3 do not include provision for the needs of the independent countries which were previously part of the RSA. However, they do illustrate certain important points that must be taken into consideration in devising a programme to achieve educational facilities of equal quality in South Africa.

The estimates show, firstly, that the financial requirements of such a programme are very sensitive to the period over which the elimination of the existing backlog is aimed at. Secondly, the differences between the figures in the second and third columns, which are based on two different school building area per pupil standards, indicate the sensitivity of the financial requirements for the standard of school facilities at which it is attempted to reach parity.

The highest annual financial requirement for the period 1980-1985 indicated in Table 5.3, namely R641 million if the backlog is to be eliminated over five years, and the higher standard of provision that is aimed at, would have amounted to 17,1 % of the total capital expenditure of public authorities in South Africa in 1980, and to 40 % of total invest-

ment in non-residential buildings in South Africa in 1980. For the lowest financial requirement over the same period, namely R227,3 million with elimination of the backlog over 20 years and parity to be reached at the lower standard, the corresponding percentages would have been 6,1 % and 14,2 %. As in the case of current expenditure, it is evident that to bring the financial implications of equal provision of educational facilities within financially realistic bounds, adjustments may have to be made in the building norms at which parity must be reached, and to the period over which this goal is to be achieved.

This would amount to a reversal of tendencies observed during the whole post-World War II period, and in particular during the 1970s.

5.5 CONCLUSIONS

In this chapter an attempt was made to evaluate the financial implications of setting educational spending parity between population groups as an objective over a ten-year timespan. To grasp the significance of these financial projections it is still necessary to place them against the perspective of the capacity of the economy as a whole, as will be done in the next chapter. However, what has already emerged clearly from the figures presented in this chapter is that the financial requirements of educational spending parity are very sensitive to the parity norms which are chosen, and that adjustments in already accepted norms may be necessary to bring the financial implications of parity within manageable proportions. It was also shown that the financial requirements of moving towards parity are rather sensitive to the period over which parity is aimed at.

It remains only to be emphasized that in following the procedure outlined above, which was based on projections per population group, the work committee did not commit itself to an approach towards parity within a framework of segregated educational systems for the different population groups. The object was merely to utilize a workable procedure, on the basis of available information, to estimate the financial implications of educational spending parity. The question of what kind of educational system would provide the most suitable framework for moving towards educational parity is not only a question of financial requirements. Although it will be touched upon in other chapters of this work committee's report, it involves broader issues which will have to be addressed in more depth by other work committees, and by the Main Committee.

BROADER ECONOMIC IMPLICATIONS OF PROJECTED FINANCIAL REQUIREMENTS FOR EDUCATIONAL PARITY

6.1 INTRODUCTION

The latest available medium to longer-term projections for the South African economy appear in the ninth Economic Development Programme for the Republic of South Africa, published in 1979 by the Office of the Economic Adviser to the Prime Minister. These projections suggested that if certain structural tendencies which took place in the South African economy during the 1970s were to be continued, the annual rate of increase in the real gross domestic product would average only about 3,6 % over the period 1978 to 1987. Among the implications of such a low growth rate would be a possible increase in the unemployment rate among all population groups from 10,6 % in 1978 to as much as 22 % towards the end of the period. Since such a course of affairs can obviously not be accepted, certain adjustments would have to be made in the structure of the economy to bring about a more acceptable development. The necessary adjustments that were identified, must be aimed in particular at bringing about a better balance between domestic saving and investment than developed in the first two-thirds of the 1970s.

Among the adjustments singled out as essential were strict control over public spending, an accompanying lightening of the direct tax burden on individuals and companies to allow for expansion in the private sector; an accommodating monetary policy which would, while avoiding inflationary financing, allow an adequate rate of expansion in the money supply to finance real growth, and additional measures to encourage exports. The projections suggested that a policy package of this nature could push up the average annual growth rate to about 5 % over the period 1978 to 1987, and that this would be sufficient to prevent the unemployment rate from rising above its 1978 level.

Since the publication of the EDP, monetary and fiscal policies have continued more or less along the lines of the policy package outlined in that document. The actual performance of the South African economy over the three years 1978 to 1980, culminating in a growth rate of some 8 % in real GDP in 1980, and the prospects that a growth rate of around 5 % is possible in 1981, also indicate that the attainment of an average annual growth rate in real GDP of 5 % over the medium to longer term, as

projected in the most favourable EDP scenario, is by no means impossible. The fact that the gold price has so far moved at levels substantially higher than was assumed in the EDP, may even open up the possibility of a somewhat higher medium to longer-term growth rate. However, other factors which also affect the growth prospects of the South African economy, such as the economic performances of South Africa's principle trading partners, have turned out less favourably than was assumed in the EDP. Unduly optimistic conclusions about the prospects for the South African economy should therefore not be drawn on the basis of the performance of the gold price.

6.2 THE SCOPE FOR PUBLIC EXPENDITURE

The economic strategy mapped out in the EDP, and adhered to in most important respects over the past five years, rests strongly on maintaining a sound balance between the growth of public expenditure and public revenues. For the period 1978 to 1987 as a whole, the EDP projections suggest that the current expenditure of general government authorities, expressed in constant prices, must on the whole not be allowed to grow at more than 3,5 % per annum, and that the growth in capital spending by the public sector must be held at an average annual rate of 1,5 %, also expressed in constant prices. If account is taken of normal population growth, such a low rate of growth in current government spending would barely allow for the maintenance of public services at their present levels, and to stay within the postulated growth rate for public capital spending would require substantial cutbacks in the planned capital programmes of institutions in the public sector.

6.3 THE SCOPE FOR PUBLIC SPENDING ON EDUCATION

The educational expenditure required for the achievement of parity by 1990 for the whole population, as set out in Table 5.1, would involve real annual rates of increase in excess of 4,5 %, as shown in Table 6.1.

Table 6.1

Average annual rate of growth of estimated financial requirements of parity in education with different pupil-teacher ratios (at constant 1980 prices) ¹⁾

Period	Scenario ²⁾					
	1	2	3	4	5	6
	Per cent					
1980 to 1990	7,3	9,4	7,8	6,5	4,7	6,8
1980 to 1985	6,3	7,1		5,3		
1985 to 1990	8,3	11,8		7,9		

1) Table 5.1.

2) Scenarios as in Table 5.1.

Given the projections of total current government expenditure in the EDP, namely 3,5 % per annum over the medium to longer term, this means that current government spending on education would have to increase much more rapidly than current government spending as a whole, if the stated parity objectives are to be achieved - in other words, as indicated in Table 6.2, the share of current educational expenditure in total current government spending would have to increase quite substantially from its present level of about 15 %.

Table 6.2

Estimated financial requirements of parity in education with different pupil-teacher ratios, as a percentage of projected current expenditure by general government for the period 1980 to 1990 (at constant 1980 prices) ¹⁾

Year	Scenario ²⁾					
	1	2	3	4	5	6
	Per cent					
1980	28,2	28,2	28,1	28,1		
1985	28,5	29,6	27,0	27,0		
1990	31,5	38,3	32,8	29,2		

1) Table 5.1

SOUTH AFRICAN RESERVE BANK. (Statistical information).

2) Scenarios as in Table 5.1.

According to figures published in the EDP, current government spending on education, expressed in constant prices, increased during the 1950s at an average annual rate of 3,0 %, while total current government spending grew at 3,4 % per annum. During the 1960s the corresponding growth rates were 5,9 and 7,4 %, respectively, and over the period 1970 to 1978, 2,5 and 5,5 % respectively. ¹⁾ During the 1970s defence spending was the only broad category of government expenditure which grew at an appreciably higher rate than the total.

It seems quite clear, therefore, that meeting the financial requirements for a movement towards current spending parity in education in accordance with even the least ambitious of the scenarios set out in Table 5.1, would require a fairly drastic reordering of priorities in the allocation of general government expenditure. Seen exclusively from the viewpoint of an investigation into education, such a reordering of priorities would appear to be self-evidently desirable. However, in a broader perspective it must be realized that education is but one of a number of functions which all compete for the available government finances - an increased growth rate for spending on education must, within the limits set by the scope for total current government spending, inevitably be at the cost of lowered growth rates in the financial support provided by government to other functions.

Among those other government functions are defence, which is in fact likely to continue to make increasing demands on government financing, health services, the upgrading of living conditions in relatively deprived urban areas, rural development, and a host of others. Apart from the claims which at least some of these functions have in their own right for priority attention, some of them must perform a crucial supporting role to efforts at achieving educational parity. This has already been emphasized in Chapter 2, where among the implications of the educational principles for the financing of education, it was pointed out *...that the quality of education is not determined solely by the quantity and quality of resources, including financing, which are applied in the formal teaching situation. The socio-economic background of the pupils/students, and the socio-economic environment into which graduates of the formal school system are released, are also important conditioning factors. These factors may even compete with formal education for the available resources.*

In conjunction with the projections on educational financing requirements in the previous chapter, the macro-economic projections presented in this chapter underline the fact that education must compete with other government functions for public financing, the scope of which in itself is limited by growth and development objectives pursued in the country. Educational objectives, including parity objectives, can therefore not be set in absolute terms, but must be chosen with due consideration of the cost of their attainment, measured in terms of other objectives foregone.

This is not to say that a higher priority for education in the allocation of government funds must be ruled out. What it does mean, is that when educational norms are chosen, not only puristic educational considerations are relevant, but also the cost implications which they are likely to have.

RECONCILING DEMAND FOR EDUCATION WITH AVAILABLE FINANCING

In trying to resolve the conflict, pointed out in the previous chapter, between the demands posed by educational objectives - in particular parity objectives - and the financial resources available to meet those demands, various approaches are possible. The work committee ruled out one approach from the outset, namely the acceptance of the status quo of large differences in the extent to which the different population groups participate in, and are provided for, by the educational system. The grounds on which this approach was rejected, were simply that if this had been an acceptable approach, no investigation into education would have been launched by the government. Various other approaches suggested themselves, and each of these will be discussed briefly in this chapter.

7.1 PURSUE EDUCATIONAL OBJECTIVES, BASED ON PRESENT NORMS FOR WHITE EDUCATION, IRRESPECTIVE OF IMPLICATIONS FOR OTHER (i.e. NON-EDUCATIONAL) OBJECTIVES

One approach would be to set up the attainment of parity for the other population groups with the standards already achieved in White education, as an overriding priority, and to pursue it irrespective of the sacrifices this may necessitate with regard to the attainment of other objectives. In Table 5.1 this approach was to some extent exemplified in Column 2, which showed that attainment of present White pupil-teacher ratios for all population groups by 1990, could result in more than R1 billion higher expenditure in that year than some of the less ambitious alternatives.

Although such an approach may be attractive from some viewpoints, it has certain distinct disadvantages.

In the first place, exactly because it would require quite heavy sacrifices in terms of other objectives foregone, it is likely to run into strong opposition and would therefore be most difficult to implement.

In the second place, on the grounds argued in the conclusion to the previous chapter, the frustration of other objectives which this approach would entail, may be self-defeating from the viewpoint of educational objectives, because of complementarities that exist between education

and other government functions.

Thirdly, this approach starts from the premise that the quality of White education represents the ideal, whereas at least in principle it is possible that White education as well as education for the other population groups could benefit from a revision of established norms and practices.

7.2 MAINTAIN PRESENT NORMS IN RESPECT OF WHITE EDUCATION, BUT ACCEPT *MORE REALISTIC* OBJECTIVES FOR OTHER POPULATION GROUPS

A second approach would be to acknowledge the limitations imposed by available financial resources, by accepting less ambitious objectives for some population groups than for others. It would, however, differ from an acceptance of the status quo in that it would set explicit objectives which would entail a narrowing, even if not an elimination, of present differences or *gaps* within a specified time-scale. Column 1 of Table 5.1, in which a 30 : 1 pupil-teacher ratio in 1990 is set as an objective for Blacks, as against 20 : 1 for the other population groups, exemplifies this approach. Although it does have the advantage of taking account of financial realities, this approach has the big disadvantage of explicitly postponing, more or less indefinitely, the achievement of full parity. Like the first approach, it suffers the additional disadvantage of accepting uncritically that present standards of White education are in some sense ideal.

7.3 ADJUST PRESENT NORMS FOR WHITES AND APPLY FOR ALL POPULATION GROUPS

A third approach would be to adjust the present norms for White education in such a way that, if the adjusted norms are also applied for the other population groups, the total financial requirements of parity objectives would be reduced to more manageable proportions. Columns 3, 4 and 5 of Table 5.1 all exemplify this approach, and illustrate that enormous financial economies can be achieved along such lines.

Besides being financially more realistic, this approach has the advantage of retaining full parity as an objective within an explicit time-frame, and also of opening the way for a critical reassessment of presently accepted norms in respect of White education.

7.4 ESTABLISH NEW SET OF NORMS FOR WHICH CENTRAL GOVERNMENT CAN REALISTICALLY ASSUME FINANCIAL RESPONSIBILITY FOR ALL POPULATION GROUPS, WITH DIFFERENTIATION ABOVE THOSE NORMS TO BE THE RESPONSIBILITY OF RESPECTIVE COMMUNITIES

Still another approach would take the third approach a step further by drawing a distinction between a basic but functional standard of education to be financially underwritten by the central government, and improvements on that standard for which individual communities must shoulder the additional financial responsibility if they choose to adopt them. In the first instance, such an approach would not necessarily reduce the total financial requirements, but merely shift some of the financing burden from the central government to individual communities. However, to the extent that a shouldering of an increased share of the total financing of education imposes more modesty in the setting of norms, there may indeed be a reduction in the overall financing requirement. More will be said about the implications of such an approach in the following chapter, in discussing alternative financing systems.

7.5 CONCLUSIONS

Various approaches towards reconciling the demand for education with the available financial resources are possible. In choosing an approach from these various alternatives, the most important criteria must be the extent to which parity can be achieved without unduly disregarding sound educational practice, and the financial realism of the various approaches. On the basis of these criteria it would seem that the third and fourth approaches, outlined above, commend themselves. It now remains to be considered how these approaches can be implemented within a workable system of education financing.

PATTERNS OF EDUCATION FINANCING

8.1 SOUTH AFRICA

The present pattern of education financing in South Africa was briefly described in Chapter 5. It appeared there that the responsibility for ordinary primary and secondary school education rests with a variety of authorities. Most of these authorities are at the intermediate level of government, namely the four provinces for White pupils and the seven national state governments for Blacks attending school in those states. Only where such intermediate levels of government do not exist, as in the case of Blacks outside the national states, is this kind of education the responsibility of the central government. As far as Coloureds and Asians are concerned, the tendency has been towards settling the responsibility for primary and secondary education on authorities established for those communities; with the constitutional future for these two communities at present unclear, however, the responsibility for their educational programmes at present also rests with a central government department.

While the responsibility for ordinary primary and secondary education thus tends to rest with intermediate levels of government, and the actual expenditure therefore takes place at that level, the source of financing for those expenditures is predominantly the central State Revenue Fund, through the application of the subsidy formula discussed in Chapter 5. In the 1979/80 financial year, for example, the current net education spending of the four provincial administrations amounted to R644 205 000, but the education revenues of the four administrations together (mainly from examination fees, hostel revenues, bus transport revenues, and repayment of bursaries) amounted to only R26,3 million.

This pattern of centralized financing and decentralized execution arose from the fact that while primary and secondary education are functions assigned in the Constitution to the provinces together with a number of other functions, the revenue sources of the provinces are limited, and have become increasingly so. Up to 1970 the provinces could still levy certain direct taxes, but these powers were then taken away from them and reserved for the central government. Indirect taxation has also

tended to be the preserve of the central government in South Africa. To perform the functions assigned to them, such as education, the provinces therefore have to rely on transfer payments from the central government.

8.2 OTHER COUNTRIES ¹⁾

Among the countries in respect of which information was obtained by the work committee, the United Kingdom has a financing pattern for primary and secondary education which has certain features in common with that obtaining in South Africa. Although the responsibility for educational programmes rests with local educational authorities at the county level, and education spending by these authorities makes out 85 % of the national education budget, over 60 % of the total approved expenditures of those authorities was in fact financed through rate support grants from the central government. Local revenues sources do, however, account for a much larger proportion of education financing than in South Africa.

All the other countries in respect of which information was obtained, have federal constitutions, and the general pattern of education financing is for either intermediate or local levels of government to bear the main financial burden of education, with the central or federal government playing a more limited role. This is illustrated by the information summarized in Table 8.1.

Table 8.1

Contributions of different levels of government to financing of public primary and secondary education in selected countries ¹⁾

Country and year	Percentage of education spending financed by following levels of government				
	Central/ Federal	Provincial/ State	Local	Private	Total
United States, 1978	8,1	44,1	47,8	n.a.	100,0
Canada, 1973/74	9,4	59,3	22,6	8,7	100,0
West Germany	2	64	30	4	100,0
Switzerland, 1974	1	40	59	n.a.	100,0 ²⁾
Switzerland, 1974	4	87	9	n.a.	100,0 ³⁾

1) KRUGER, P. Finansiering van onderwys in 'n aantal oorsese lande.

2) Primary and junior secondary.

3) Senior secondary.

1) Based on KRUGER, P. Finansiering van onderwys in 'n aantal oorsese lande.

Two general observations must be made about this. The first is that the central governments of these countries all tend to assume a larger share of the financial burden of categories of education other than primary and secondary education, such as university and technical education. Even in Switzerland, with its highly decentralized political system, the federal government provided 67 % of the financing of universities (and research), and 25 % of the financing of vocational training.

The second observation is that in virtually all the countries mentioned, the share of the federal or central governments in the financing of primary and secondary education has tended to rise. This is a tendency which is related to increasing financial difficulties experienced by lower-level government authorities - partly because of increased responsibilities, partly because of changes in the economic structure in their areas of jurisdiction which have tended to erode their traditional revenue bases, and partly because of the inherent inelasticity of their traditional revenue sources, such as property taxes. However, the tendency towards an increasing central government role in the financing of education in these countries is evidently also related to another factor, namely the differences that arose between levels of education spending in different communities under the system of decentralized financing of education. For example, in the United States during the years 1975 to 1977 5,6 % of the school districts spent less than \$800 per pupil per annum, and 3,1 % of the districts spent more than \$2 600 per pupil per annum. One purpose of an increasing centralization of financing has evidently been to reduce such differences by supplementing the spending capacity of communities with less favourable own revenue bases.

Typically the main revenue source of local authorities in the countries referred to, part of the proceeds of which is allocated to the financing of education, is property taxes. Provincial or state governments, in turn, utilize a variety of sales taxes.

8.3 CONCLUSIONS

In contrast to countries with a federal system of government, where the financial burden of primary and secondary education is mainly borne by local and intermediate levels of government, and the central or federal government tends to make its contribution mainly in respect of university and vocational education, South Africa has a highly centralized

system of financing of all educational categories. In respect of ordinary primary and secondary education, however, the actual execution of educational programmes is primarily the responsibility of intermediate-level authorities, such as the provincial administrations.

If, for whatever reasons, a change in South Africa's pattern of education financing towards a greater decentralization should be considered desirable, account will have to be taken of certain factors. The first is that such a shifting of the real financial responsibility to intermediate or local levels of government would require a fundamental adjustment in the division of revenue-raising instruments between the various levels of government in South Africa. At present neither the provinces, nor the national state governments, nor the local authorities have at their disposal adequate revenue-raising instruments to be able to shoulder such an increased direct responsibility for the financing of education. If an education programme must depend on drastic changes in these present fiscal arrangements between different levels of government, the implementation of the programme may be delayed considerably.

The second factor to consider is that experience in countries with more decentralized financing of education has shown that if equality in levels of education spending between different communities becomes an objective, an increased role for the central or federal government in the financing of education follows. In view of the emphasis on parity objectives in the present investigation, the central government will therefore most likely have to continue to play a prominent, even if a reduced, role in the financing of ordinary primary and secondary education in South Africa.

CHAPTER 9

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

9.1 THE ECONOMIC JUSTIFICATION FOR EXPENDITURE ON EDUCATION

In principle a case can be made out on economic grounds for positive expenditure on education, and also for the state to accept responsibility for at least part of that expenditure. However, there are no clear-cut empirical grounds for determining the optimum level of expenditure on education in a given society, or the optimum share of the state in that expenditure.

Although available statistics in respect of South Africa may be read to indicate a comparatively low level of public expenditure on education, these figures must be seen against the perspective of a comparatively low overall level of public expenditure. There are, however, grounds for believing that the allocation of public expenditure in South Africa between members of the different population groups has been non-optimal, in the sense that a different distribution may have yielded higher returns on the investment made in education. Alternatively, maintenance of the present skewness of distribution of expenditure on education between individuals, but with a different selection procedure for entry into the *elite group*, which does not make race, colour, creed or sex a criterion, may have yielded a higher return than either the present pattern or a redistribution of spending between population groups as such.

9.2 IMPLICATIONS OF THE MAIN COMMITTEE'S PRINCIPLES FOR THE PROVISION OF EDUCATION

The overriding implication of the principles for the provision of education is that the provision of education of equal quality requires as a necessary condition parity in some way or other in the level of financing as between different individuals irrespective of race, colour, creed or sex. In operationalizing this requirement in financial terms, it is inevitable that realistic norms be set to determine the financial needs in respect of the provision of education, in particular as far as the state's responsibility in meeting those needs is concerned.

The responsibility that the state can realistically be expected to as-

sume in respect of the financing of education, is constrained by the overall capacity of the economy and by the claims of other community needs. Some of the other community needs are related to educational needs, and if they are not met, this could have a negative effect on the effectiveness of spending on education.

To bridge the gap which therefore exists between the financial contribution of the state to the provision of education, on the one hand, and the variety of educational needs, on the other, some level of financial commitment is required on the part of the individual and of the community to supplement the state's contribution.

In allocating the financial resources available for spending on education between different kinds of education, expression must be given to the relative values which society places on the general formative role of education, on manpower needs, on economic development, and on other needs of communities.

Finally, in choosing channels for education financing with a view to achieve whatever balance between centralized and decentralized provision of education is considered to be desirable, account should be taken of the revenue sources available to educational management structures at the various levels.

9.3 STATISTICAL SURVEY OF THE PRESENT EDUCATIONAL SITUATION IN SOUTH AFRICA

A statistical survey of the present educational situation in South Africa shows up marked educational disparities between the different population groups.

As far as participation in formal education is concerned, Blacks are markedly underrepresented at all levels of education, but increasingly so as the level of education rises. For Asians and Coloureds, the particular statistics used in this chapter do not reveal such striking disparities as in the case of Blacks, except that Coloureds appear to be markedly underrepresented at university level, and Asians in so far as education for the handicapped is concerned. In some respects, these two population groups can even be said to be *overparticipating*.

However, the higher pupil-teacher ratios in the case of Asians and

Coloureds, and particularly in the case of Blacks, and the differences in the distribution of teachers' qualifications within the different population groups, suggest that disparities should not only be measured in terms of participation rates, but also in terms of the provision of those educational facilities which determine the quality of education enjoyed by those who do participate.

In this latter respect, the estimates of unit cost of education for the different population groups that are now available are unreliable indicators of the existing degrees of disparity. With a view to effectively monitoring progress towards equality in the provision of education, it is urgently necessary to provide more reliable and comparable estimates of unit costs of education.

9.4 PROJECTED DEMOGRAPHIC DEMAND FOR EDUCATION

Of the different educational categories considered, the available statistical information is most complete and detailed for ordinary primary and secondary schools and, among the tertiary institutions, for teachers' training colleges and universities. It is only in respect of these institutions, therefore, that a sound basis exists for making statistical projections of needs.

Over the timespan of ten years considered in this chapter, the projections suggest that the demand for ordinary educational facilities at the primary school level is set to decline in the case of Whites and Coloureds, but to increase among both other population groups. At the secondary school level, the demand is projected to decline only among Whites, but to increase for all three of the other population groups. Both in terms of growth rates and of absolute numbers, the projected increases are far and away the largest for Blacks, who at present show the largest backlogs both in terms of participation in educational activities, and provision thereof. The demand for places at teachers' training colleges will be determined by the extent to which these projections with regard to pupil numbers at primary and secondary schools are realized.

At university level, the growth rates in the numbers of students are projected to be the highest for Asians, Blacks and Coloureds, but in absolute numbers the projected growth is still the highest for Whites in the timespan of the decade which was considered.

9.5 DIRECT FINANCIAL REQUIREMENTS OF PROJECTED DEMOGRAPHIC DEMAND WITH PARITY OBJECTIVES

The structure of educational financing in South Africa can be characterized as highly centralized, in that the central government is the main financing source for all state-provided categories of education, even although the actual execution of educational programmes is highly decentralized among a variety of departments and authorities. The norms according to which funds are channeled from the central State Revenue Fund to these various educational institutions, vary a great deal. With the prevailing budgetary system, historical levels of funding are an important determinant of new fund allocations, but in recent years there have been purposeful attempts to step up the growth rates of allocations for Asian, Black and Coloured education.

For practical statistical reasons it was decided to use the formula employed in the provincial financing of White primary and secondary education from the State Revenue Fund as the basis for assessing the financial implications of parity objectives in education. The purpose of the exercise, which relates only to current expenditure on education, was to determine, with regard to ordinary primary and secondary education, what the financial implications would be if the objective was set to achieve parity between the different population groups over various time periods as far as state expenditure per comparable pupil is concerned.

Taking the lower population projections accepted by the Main Committee, total education expenditure was estimated by multiplying the projected numbers of primary and secondary pupils by fixed amounts, based on the expenditure per pupil allowed for in the provincial subsidy formula. Since differences obtaining initially between population groups in respect of such factors as pupil-teacher ratios, qualifications of teachers, and teachers' salaries, cannot be eliminated overnight, these differences were adjusted from year to year to reach parity by a chosen year. With 1990 as the parity year and different objectives in respect of pupil-teachers ratios, the following results were obtained.

TABLE 9.1

Estimated financial requirements of parity in education with different pupil-teacher ratios, 1980 to 1990 ²⁾

Year	Scenarios ¹⁾					
	1	2	3	4	5	6
	R million (constant 1979/80 prices)					
1980	2 150	2 150	2 150	2 150	2 150	2 150
1985	2 915	3 026		2 762		
1990	4 347	5 282	4 531	4 031	3 406	4 020

1) Scenarios:

1. Pupil-teacher ratio of 30 : 1 reached for Blacks by 1990, as against 20 : 1 for all other population groups.
2. Pupil-teacher ratio of 20 : 1 reached for all population groups by 1990.
3. Pupil-teacher ratio of 25 : 1 reached for all population groups by 1990.
4. Pupil-teacher ratio of 30 : 1 reached for all population groups by 1990.
5. Pupil-teacher ratio of 40 : 1 reached for all population groups by 1990.
6. Pupil-teacher ratio of 25 : 1 for Asians and Coloureds, 40 : 1 for Blacks, and 20 : 1 for Whites in 1990.

In all scenarios differences in teacher qualifications and salaries between population groups are eliminated by 1990.

- 2) BUURKE, P.F. & DEDNAM, E.H. Beraming van onderwysbesteding ten opsigte van primêre en sekondêre onderwys indien die subsidieformule soos van toepassing op Blanke provinsiale onderwys vir die onderwys van alle bevolkingsgroepe toegepas sou word.

The differences between the columns in this table underline an important principle, namely that the financial implications or parity objectives are very sensitive to the choice of parity norms. If, for example, the present pupil-teacher ratio for Whites is accepted as the parity norm for all population groups, as in Column 2, the projected educational expenditure in 1990 is R1 250 million, or more than a quarter higher than if a norm of 30 : 1 is accepted for all population groups (including Whites), as in Column 4. One way to bring the financial implications of expenditure parity within realistic bounds could therefore be not to accept present norms in respect of White edu-

cation as the objective, but to adjust those norms. In making such adjustments, account will have to be taken of sound educational principles without imposing these as absolute imperatives.

To grasp the significance of these financial projections it is necessary to place them against the perspective of the capacity of the South African economy as a whole.

9.6 BROADER ECONOMIC IMPLICATIONS OF PROJECTED FINANCIAL REQUIREMENTS FOR EDUCATIONAL PARITY

The economic strategy which is indicated for South Africa in the next number of years, if income and employment needs are to be met, rests heavily on maintaining a sound balance between the growth of public expenditure and public revenue, and a sound balance between public and private spending. If the projected financial requirements for achieving educational parity in 1990, as set out above, are set against the projected growth of current government expenditure in terms of such an economic strategy, the following results are obtained.

Table 9.2

Estimated financial requirements of parity in connection with different pupil-teacher ratios, as a percentage of projected current expenditure by general government in South Africa, 1980 to 1990 ¹⁾

Year	Scenarios ²⁾			
	1	2	3	4
	Per cent			
1980	28,2	28,2	28,1	28,1
1985	28,5	29,6	27,0	27,0
1990	31,5	38,3	32,8	29,2

1) Previous table.
SOUTH AFRICAN RESERVE BANK. (Statistical information).

2) Scenarios as in footnotes to previous table.

Taking into consideration that in recent years current government spending on education amounted only to some 15 or 16 % of total current government expenditure, it seems quite clear that meeting the financial requirements for a movement towards current spending parity in education

in accordance with even the least ambitious of the scenarios considered earlier, would require quite a drastic re-ordering of priorities in the allocation of general government expenditure.¹⁾ In a broader perspective, such an increased priority for educational spending must, within the limits set by the scope for total current government spending, inevitably be at the cost of lowered growth rates in the financial support provided by government to other functions, such as defence, the upgrading of living conditions in relatively deprived urban areas, rural development; and still others. Some of these must perform a crucial supporting role to efforts at achieving educational parity. Educational objectives, including parity objectives, can therefore not be set in absolute terms, but must be chosen with due consideration of the cost of their attainment, measured in terms of other objectives foregone.

9.7 RECONCILING DEMAND FOR EDUCATION WITH AVAILABLE FINANCING

In trying to resolve the conflict which arises between the demands posed by educational objectives, in particular parity objectives, and the financial resources available to meet those demands, various approaches are possible - to pursue educational objectives, based on present norms for White education, irrespective of implications for other (i.e. non-educational) objectives; to maintain present norms in respect of White education, but accept *more realistic* objectives for the other population groups; to adjust present norms for Whites to more realistic levels and apply those for all population groups; or to establish a new set of norms for which the central government can realistically assume financial responsibility in respect of all population groups, with differentiation above those norms to be the responsibility of individual communities.

In choosing an approach from these various alternatives, the most important criteria must be the extent to which parity can be achieved without unduly disregarding sound educational practice, and the financial realism of the various approaches. From a tactical viewpoint, the chosen approach should preferably also not require drastic changes in the present fiscal arrangements between the different levels of government, since the time required to effect such changes could delay progress towards educational parity.

1) The abrupt increase from the 15 to 16 per cent level to the 28 per cent level somewhat overstates the immediate budgetary impact. This arises from the statistical procedure used, in which only the three identified qualitative factors, viz pupil-teacher ratio, teachers' qualifications, and teachers' salaries were adjusted gradually towards parity. By implication, all other qualitative disparities between population groups were assumed to be eliminated in the first year. In practice this would, of course not be possible and the actual build-up towards the 28 per cent level will therefore be more gradual.

In contrast to countries with a federal system of government, where the financial burden of primary and secondary education is mainly borne by local or intermediate levels of government, and the central or federal government tends to make its contribution mainly in respect of university and vocational education, South Africa has a highly centralized system of financing of all educational categories. In respect of ordinary primary and secondary education, however, the actual execution of educational programmes is primarily the responsibility of intermediate-level authorities, such as the provincial administrations.

If, for whatever reasons, a change in South Africa's pattern of education financing towards a greater decentralization should be considered desirable, account will have to be taken of certain factors. The first is that such a shifting of the real financial responsibility to intermediate or local levels of government would require a fundamental adjustment in the division of revenue-raising instruments between the various levels of government in South Africa. At present neither the provinces, nor the national state governments, nor the local authorities have at their disposal adequate revenue-raising instruments to be able to shoulder such an increased direct responsibility for the financing of education. If an education programme must depend on drastic changes in these present fiscal arrangements between different levels of government, the implementation of the programme may be delayed considerably.

The second factor to consider, is that experience in countries with more decentralized financing of education suggests that if equality in levels of education spending between different communities becomes an objective, an increased role for the central or federal government in the financing of education with a view to redressing inequalities follows. In view of the emphasis on parity objectives in the present investigation, the central government will therefore most likely have to continue to play a prominent, even if a reduced, role in the financing of ordinary primary and secondary education in South Africa.

9.9 CONCLUSIONS AND RECOMMENDATIONS

The results of the investigation by the Work Committee: Education fi-

nancing lead to the following main conclusions:

- 9.9.1.1 There are at present large differences between the four main population groups as far as participation in, and provision of, educational facilities are concerned. The biggest backlogs are experienced by the population group which is by far the largest in numbers, and which will show both the highest growth rate and the largest absolute increases in numbers in the coming years. In striving towards equal quality education, both the elimination of backlogs and the meeting of current needs must be dealt with.
- 9.9.1.2 To comply with the educational principles of the Main Committee, it must be attempted, at least as far as the central government's contribution to the financing of education is concerned, to achieve equality in the financial provision per comparable educational unit, irrespective of race, colour, creed or sex. The financial implications of this for the central government, are, however, extremely sensitive to the norms which are in various respects laid down for educational parity. To serve as a basis for a programme aimed at educational parity for the whole population in so far as central government's contribution to the financing of education is concerned, a norm would have to be established that would provide a functional system of education, but would at the same time be financially realistic.
- 9.9.1.3 The total size of public expenditure in South Africa will have to continue to be strictly controlled in the next number of years, and within those limits education must compete with other government functions which are important in their own right, and which in some cases must perform an essential supporting and complementary role to education.
- 9.9.1.4 With a view to keeping the financial responsibility of the central government in respect of education within manageable proportions, there is much to be said for more decentralization of the burden of education financing than now obtains in South Africa. However, experience elsewhere has shown that the reduction of differences in the quality of education between communities exerts strong pressures towards centralization of the responsibility for education financing. Moreover, the intermediate and local authorities do not under South Africa's present tax structure dispose of adequate revenue sources to shoulder a larger part of the financial burden of education.

These conclusions give rise to the following recommendations by the Work Committee: Education financing:

9.9.2.1 The attainment of parity in central government expenditure on education, on the basis of the norms recommended in 9.9.2.3 below, should be aimed at over as short a period as allowed by budgetary, manpower and other economic constraints.

With this in view, each educational authority should, commencing immediately upon the acceptance by government of these recommendations, submit its annual budgetary requests on the basis of a programme aimed at achieving parity over specified time periods, and these budgetary requests should be co-ordinated by a central education authority.

9.9.2.2 In addition to the budgetary provisions required to carry out recommendation 9.9.2.1, specific budgetary provision should be made to eliminate over as short a period as allowed by budgetary, manpower and other economic constraints, existing backlogs in respect of such factors as the quantity and quality school buildings, the qualifications of teachers, pupil-teacher ratios, and teachers' salaries. (The backlogs must be measured relative to the norms recommended in 9.9.2.3 below.)

9.9.2.3 Financially realistic norms for providing a functionally adequate quality of education irrespective of race, colour, creed or sex, should be formulated and revised from time to time by a central educational authority, and be used as the basis for central government financing of education for the whole population.

9.9.2.4 When consideration is given to the introduction of innovations in education or to any other proposals which may have implications for central government financing of education, the full financial implications in respect of the whole educational system should be taken into account.

9.9.2.5 A reliable and, as between population groups, comparable statistical base should be developed urgently, to allow the progress towards parity in education spending to be monitored from year to year by a central education authority.

9.9.2.6 Differentiation in the quality of educational provision over and above

the norms recommended in 9.9.2.3 should be financed by local educational communities from their own sources, but to the extent that budgetary constraints allow, funds should be made available from central government sources to assist communities with particularly inadequate own revenue sources in the provision of services and facilities over and above the established norms.

9.9.2.7 Wherever possible, scarce educational resources, such as teachers with scarce subject qualifications, laboratories and media facilities, sports facilities etc., should be shared between education institutions so as to maximize their use.

9.9.2.8 In the approval of state funds for the introduction of new educational aids, equipment and technology, preference should be given to innovations, which will lead to the better utilization of the scarcest educational resources, e.g. qualified teachers and educational buildings.

9.9.2.9 For as long as limited resources may necessitate that significant numbers of potential pupils/students cannot be accommodated within the formal educational system ways and means should be sought to provide rudimentary, but functional, educational services to them.

9.9.2.10 State assistance to private schools should be given on a similar basis to that recommended in 9.9.2.3 and 9.9.2.6.

9.9.2.11 In formulating the norms recommended in 9.9.2.3, account should be taken of the financial implications that the application of those norms might have in respect of independent states which were formerly part of the RSA.

9.9.2.12 An investigation into the financing of the tertiary education sector should be undertaken with a view to establishing a sound and equal basis, according to standardized norms, for the financial provisioning of educational institutions at this level. The investigation should be directed towards the optimum utilization of the manpower potential in the RSA.

9.9.2.13 A similar investigation to that proposed in 9.9.2.12 should be undertaken in respect of categories of education not explicitly dealt with in the foregoing recommendations of this committee.

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